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A SERIES OF LECTURES,

BY

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WILLIAM BURGES, F.R.I.B.A.

Oxford and London:
JOHN HENRY AND JAMES PARKER.
1865.

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TO

ALEXANDER J. B. BERESFORD HOPE, Esq., F.S.A.,

WHO SO WORTHILY CONTINUES

THE ART TRADITIONS OF HIS FAMILY,

This Volume

IS RESPECTFULLY DEDICATED.

PREFACE.

THE origin of this little book is as follows.

Some three years ago Dr. Cantor, a Dane by birth, but an Army Surgeon in the Anglo-Indian service, died in India, leaving his property to be divided between the Society of Arts and Wellington College.

Last year the Society of Arts devoted the proceeds of their portion of the bequest to three courses of Lectures, viz. one on International Law, by G. W. Hastings, Esq., Barrister-at-Law; another on Chemistry applied to the Arts, by Dr. Crace Calvert, F.R.S.; and a third on Art applied to Industry.

The Lectures comprised in this latter course form the greater portion of the present work; the additions consisting of two other Lectures upon the same subject, and which were read respectively at the Architectural Association and at the South Kensington Museum.

15, BUCKINGHAM-STREET, STRAND,
Nov. 25, 1864.

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INTRODUCTORY.

It has been well observed that the world, more especially the English portion of it, during the last half century, has been in its working dress; that is to say, although we have done some very wonderful things in the way of mechanics, and have produced other things which are marvels of cheapness, yet as regards the production of really beautiful objects, particularly those required in every-day life, we have been behind most other epochs of civilization. Of course there is no *prima facie* reason why cheap things should be ugly, for a die or mould of a good design costs no more than a bad one; but still the fact remains that the objects in use in every-day life are not beautiful, and it is to effect a change in this respect that the Government have established Schools of Design and the excellent Museum of which I shall have to speak hereafter. Great praise must also be given to the Society of Arts for beginning the movement and carrying it on to the present time; and although the sphere of its action must necessarily be infinitely smaller than that of the Government Schools, yet we should always remember that the initiative of our great English exhibitions of industry came from the Society, and that it is to those exhibitions that we owe the stirring among the dry bones of industrial art which is now taking place.

In furtherance of the latter object I have been requested by the Council of the Society to give a few lectures, shewing how the arts have formerly been applied to industry; how they are at present applied, and what may possibly be done to increase their application. Now there are various phases of art workmanship: thus a single expensive thing may be done to order, such as a piece of jewellery, or what is called a race cup; or a few expensive things may be turned out, such as Wedgewood's copies of the Portland Vase; but decidedly the best application of art to industry is when a great many copies are made from an exceedingly good pattern. The two former con-

ditions have very little effect on the progress of art, but the last one is everybody's business; for it just comes to this, Are we to have ugly or beautiful things continually before our eyes? Let us for a moment consider the numberless objects of every-day life made by the aid of machinery or of low-skilled labour, and the question acquires additional force. In ancient times the problem was solved. The Greek saucepan or water-jug was really a work of art, and doubtless cost no more than ours do: and indeed, now-a-days, such things ought to cost us much less, considering the great mechanical means at our disposal. When, however, we do get excellent designs they generally turn out to be very dear, and an impression seems to be afloat, that if a thing is beautiful, machinery should have nothing to do with it; hence it only gets into the hands of the few; whereas the real mission of machinery is to reduce pounds to shillings and shillings to pence. This unwillingness to use machinery may, perhaps, be traced to the teaching of Mr. Ruskin and of the late Mr. Pugin, but then these gentlemen have unfortunately been misunderstood. What they battled for was the disuse of purely mechanical means in the production of architectural ornaments. Thus, in a building, they objected to cast leaves in a cornice because one would be exactly like another, and because the undercuttings could not be obtained from a mould; but, as far as I can see, they never objected to the proper employment of machinery as a help to either the artist or workman. In fact, Pugin says in one of his works that had he a cathedral to build, one of the first things he would do would be to set up a lathe to turn the smaller columns. How completely his teaching has been misunderstood will be evident from the following two instances. The first is that of a large firm who turn out very pretty tinned iron door-rings, just the sort of things that we should like to see on all our drawers and all our book-cases. Well, these rings are made by hand, and cost from 3s. 6d. to 1s. 6d. Of course it is needless to say that they are not upon all our drawers and all our bookcases, and if the truth must be told, very few of them are sold at all. Some time ago, a gun-lock maker offered to make a die and supply these identical rings at something like 3d. a-piece all round, if the firm would only take a sufficient quantity—say five hundred: but no, the firm thought that this was a case where the use of machinery should be discouraged, and the consequence is that

if any one objects to the hideous patterns in the ironmonger's shop the only resource is to buy what are called Dutch rings, value one penny, and used commonly for dresser drawers.

The other instance is, where one of our most talented artists drew a set of designs for coloured tiles, representing some of the nursery stories in the most *naïve* and charming manner. The firm for whom he made these designs caused them to be copied on the tiles by high-skilled labour; hence the price is 10s. for each tile of 4 in. square. On the other hand, had they got the artist to have engraved his outline so that it could have been transferred to the tiles in the usual manner, and then have obtained the aid of children to fill in the colours, the said tiles might have been sold for 2s., or 2s. 6d. at the outside, and we should have the advantage of the artist's own outline instead of a copy.

However, the Exhibition of 1862 has given us this comfort, namely, that we really are getting on; and although it still remains the general opinion that both English designers and English artizans are inferior to those of France, it can scarcely be denied that of late years very much has been done to catch them up. A proof of this will be found in the following opinion of a perfectly competent French writer, M. le Comte Clement de Ris [a], one of the Conservateurs of the Louvre, and who was sent over here by the French Government to visit the Loan Museum last year. He thus writes:—

"With that admirable practical sense which is at the bottom of everything the English do, those to whom the arrangement has been confided have desired not only to attract the public by the novelty of the objects, not only to draw the antiquary and artist by the beauty of these objects, but, above all, to exercise that salutary influence upon the taste of the British artisans, and to create a school for the innumerable artistic industries. Have they succeeded? The exhibition at Kensington, will it become a source of teaching more living and more direct than the International Exhibition? The future alone can tell us. But in any case I advise our French manufacturers, if they do not wish to find ten years hence in all the markets of the globe formidable rivals in matters of taste, where up to the present time they have only met humble tributaries, by no means to sleep upon their laurels, and at least be convinced that their monopoly of taste may some fine day be disputed."

Now I venture to think that most people would back this

[a] La Curiosité: Collections Françaises et etrangères cabinets d'amateurs biographies. Par M. le Comte Clement de Ris, attaché à la conservation des Musées impériaux. (Paris: Jules Renouard. 1864.)

opinion of a foreigner and, to a certain degree also, of a rival. Indeed, in some points one would be inclined to go rather farther, and assert that in one or two of our art manufactures, say for instance Minton's ware, we are not only on a par but surpass the French, even if we take the design alone, to say nothing of the manufacture. Two great causes have brought about this improvement in English work: first, the general progress of most of the arts, particularly the master ones of architecture and painting; and, secondly, the establishment of the Government School of Design, with its provincial branches and its most excellent Museum.

These schools, although used by students from nearly every class of life, from the young lady who thinks she should like to learn a little drawing, to the stone-carver's apprentice who comes after a long day's hard work, are particularly adapted to the two important classes to whom alone we must really look for improvement in the objects of every-day life. These two classes are the designer and the artisan. And first of the designer. Every firm for the most part keeps a designer, who is paid an annual salary, varying from £100 to £400, and indeed sometimes even more: for this he is expected to make all the designs and to look over their execution when required. Should the business be an extensive one he has often a drawing-office and staff of draughtsmen, over which he presides.

Sometimes the firm goes to extraneous aid and gets a design from an architect or painter; but this seldom answers in the long run, and for these réasons. In the first place, the said architect or painter is seldom up in the technical details, and he thus draws things which come more expensive in the execution than those of the designer. The latter, naturally jealous at being to a certain degree supplanted, is more inclined to throw impediments in the way than to help in removing those which exist, and the whole affair usually ends with the philosophic reflection on the part of the employer, that as he has to pay one designer, he does not very well see why he should pay two.

It is therefore clearly the designer who must be caught and properly trained in the first instance, and the Government and provincial schools no doubt offer the best means of so doing.

At present the system has hardly been established long enough to have produced any considerable quantities of

thoroughly trained designers, some of the best pupils having turned artists, while others have become masters in the provincial schools; and we shall probably have to wait some few more years before the results prophesied by M. Clement de Ris take place.

As to the artisan, to whom a knowledge of drawing and modelling would often be of the most important use in his carrying out the drawings of the designer, I am sorry to say that he has hardly taken that advantage of the schools that he might have done; most probably having before his eyes the fear of Dyce's Outlines, especially those at the end of the book.

At present I understand a much more sparing use is made of that book than used to be the case, and thus far matters are made more pleasant, for depend upon it no man is likely to attend every evening after a hard day's work if he is kept grinding at things which could be drawn by a pair of compasses or reversed by tracing paper in one-fiftieth part of the time it takes him to copy them. If the artisan is to be caught, he must be interested in what he draws, and, as a general rule, what he draws should relate directly to his own profession. To expect him to attend regularly every night of the working-week would doubtless be asking too much, but by proper management he could be induced to give some three or four evenings, and when temporarily out of work or when waiting for a job he might even attend in the day-time.

Another great source of improvement is the excellent Museum at South Kensington, which, even as a collection, takes its place at least on a par with that of the Hotel de Cluny. It is true that there are richer objects in the Parisian collection, but there are also a good many that are of comparatively little use. Now the Kensington Museum has been formed with reference to the special object of instructing the workman and designer, and the consequence is that there is no rubbish in it. Had it been placed in a more central situation, say at Charing Cross, it would have had an immense influence in educating the public generally, for people would then run in for half-an-hour when they were passing, as they do at the National Gallery: and it is precisely those half-hours that are the most precious, for people then confine their attention to one or two things and study them well, knowing that they have no time for the others; whereas when they go to see the Museum as a sight they try

to see as much as possible, and nothing gets properly studied. The consequence is that the Museum at South Kensington does only one-half the good it might do, and is visited principally by students, sight-seers, and the inhabitants of the vicinity, whereas it ought to catch all and every condition of life. Our climate unfortunately forbids us educating the people as they were educated in Athens and Florence, by the recurrence of the best works of art in the most crowded thoroughfares, but there is no reason why our museums and galleries of pictures should not be placed in similar situations, where they would be, as it were, in everybody's path.

The Architectural Museum is another useful institution. When it was established there was no public collection of casts of mediæval art. The architects and amateurs met together, subscribed, and gave to the common stock the casts contained in their several offices and collections; others were bought at the sale of the Cottingham museum, and a number were presented by Mr. Ruskin. The result was the formation of a most useful collection, which was located in Canon-row, Westminster, but which now, alas! is in captivity at Brompton. The Committee still give lectures and offer prizes, but it can hardly be denied that the casts are less accessible and the institution less useful than they used to be.

Another great fact is the enlargement of the mediæval department of the British Museum under the care of Mr. Franks. This, however, is open to the public only three days in the week, and not at all in the evening. Perhaps some day this collection will be incorporated with that at South Kensington, and if the whole be then moved up to Charing Cross, we shall have a Museum which will be one of the most complete, and, above all, one of the most useful in the world. Finally, in enumerating the various aids to our present progress, we should not forget the public spirit and kindness of those gentlemen who possess private museums or small collections of choice works of art. A glance at any of the publications devoted to art during the last dozen years will tell us on how many occasions these noblemen and gentlemen have temporarily deprived themselves of their most valued possessions to benefit their fellow-citizens. When Her Majesty, the Duke of Devonshire, and Mr. Beresford Hope, not to mention many others, send their jewels to a public museum for months to-

gether, a very practical answer is given to those people who try to set one class against another. Among secondary causes of our improvement we must not forget the splendid volumes published after the various Exhibitions, nor still less the wonderful spread of photographs, so useful in giving us correct representations of form, and so useless in rendering colour.

Allowing, therefore, the great usefulness of the Government Schools, the Exhibitions, and the Museums both public and private, the question now arises as to what are the impediments to our future progress. The principal ones appear to me to be three.

1. A want of a distinctive architecture, which is fatal to art generally.

2. The want of a good costume, which is fatal to colour; and

3. The want of a sufficient teaching of the figure, which is fatal to art in detail.

It will perhaps be as well to take these one by one.

The most fatal impediment of the three is undeniably the want of a distinctive architecture in the nineteenth century. Architecture is commonly called the mother of all the other arts, and these latter are all more or less affected by it in their details. In almost every age of the world except our own only one style of architecture has been in use, and consequently only one set of details. The designer had accordingly to master, 1. the figure, and the great principles of ornament; 2. those details of the architecture then practised which were necessary to his trade; and 3. the technical processes. Now what is the case in the present day? If we take a walk in the streets of London we may see at least half-a-dozen sorts of architecture, all with different details; and if we go to a museum we shall find specimens of the furniture, jewellery, &c., of these said different styles all beautifully classed and labelled. The student, instead of confining himself to one style as in former times, is expected to be master of all these said half-dozen, which is just as reasonable as asking him to write half-a-dozen poems in half-a-dozen languages, carefully preserving the idiomatic peculiarities of each. This we all know to be an impossibility, and the end is that our student, instead of thoroughly applying the principles of ornament to one style, is so bewildered by having the half-dozen on his hands, that he ends by knowing none of them as he ought to do. This is the case in almost every trade; and until the question of style gets

settled, it is utterly hopeless to think about any great improvement in modern art.

At present the fashion appears to have set in in favour of two very distinct styles. One is a very impure and bastard Italian, which is used in most large secular buildings; and the other is a variety of the architecture of the thirteenth century, often, I am sorry to say, not much purer than its rival, especially in the domestic examples, although its use is principally confined to ecclesiastical edifices. It is needless to say that the details of these two styles are as different from each other as light from darkness, but still we are expected to master both of them. But it is most sincerely to be hoped that in course of time one or both of them will disappear, and that we may get something of our own of which we need not be ashamed. This may, perhaps, take place in the twentieth century, it certainly, as far as I can see, will not occur in the nineteenth. But the discouraging fact still remains, that until some change does take place in this respect, it is in vain to think of any great results from all our study and all our training.

If some kind fairy could make a clean sweep of all our existing buildings and all our books on architecture, to say nothing of the architects, being then left to our own resources we might do something of our own. But as fairies have long ceased to exist, we can only live in hopes that the succeeding generations may be more fortunate. I forgot to say that the fairy would also have to hide our museums and picture-galleries for at least a couple of hundred years.

The next great impediment to progress is the want of colour in our costume. In this respect we are one degree more fortunate than in architecture, for whereas we have several styles of the latter practised at the same time, fashion is so great a tyrant that she will allow of only one kind of costume. Since the great French Revolution all colour has been gradually dying out of the male costume, until we have got reduced to our present gamut of brown, black and neutral tint; which, combined with the chimney-pot hat and the swallow-tailed coat, form a costume by no means particularly adapted to refresh the eye seeking for form or colour. Now this absence of colour is really a very serious consideration, for the eye of the designer is naturally affected by what he sees around him: thus in the East, where every one wears coloured costume, the fabrics pro-

duced are universally admired for their admirable harmony of colour. It is very true that the tints of certain garments may in the first instance be bright and gaudy, but they very soon become faded into better tones by atmospheric influences, and they are broken up by stains or discoloured by rain; or, as our great living novelist observes, "The sun takes away the colour from the cloths to give it to the flowers."

Again, Englishmen are without the sumptuous public processions, both civil and religious, wherein rich and bright costume can be studied, as abroad: the only gratuitous exhibition of this kind accessible to the Londoner being the daily relief of the troop of cavalry at the Horse Guards. It may be urged that any one desirous of studying costume has ample opportunities of so doing at our various theatres, but, unfortunately, it is but too often not only ludicrously false in an antiquarian point of view, but utterly repugnant to good taste: the costumes frequently do not even fit the wearers, and look more as if they had been hired for the night from some Jew costumier than as forming part of the wardrobe of a well-appointed theatre.

How different is all this from the old Greek theatre, where nothing was too good or too splendid to adorn what was to them a half-religious ceremony; but then their drama was intimately connected with their history and religion, and their pieces were written by such men as Æschylus, Aristophanes, and Sophocles, and were not what our newspapers euphoniously call clever adaptations from the French by the talented and prolific Mr. Blank.

Indeed, it must be confessed that our theatres are greatly in need of a most sweeping reformation, the first step to which will be the abolition of the invariable *couleur de rose* criticisms which occur in every newspaper. If an architect does a bad building, or an author writes a bad book, he deserves, and generally is fortunate enough to obtain, a strong adverse criticism; and why an actor or dramatic author should be exempt from the same very wholesome tonic is more than most people can explain. At least the Lord Chamberlain, who is endowed with almost despotic power, might set his face against translations from the French, by refusing to license them, although it might entail the inconvenience upon the dramatic authors of shutting up their French dictionaries and trusting to their wits.

Again, it may probably be objected that at least we get

colour in our female costume. This is true, but then the form is so utterly bad that it is totally unfit for art purposes. As Mr. Beresford Hope most justly observed some time since, "The ladies' costume has very greatly deteriorated within the last dozen years, and if we search into the reason of this falling off, I am afraid we must refer it to no less a person than the Empress of the French." When she attained her present high position there was a glorious opportunity open to her; and had she possessed a really artistic taste she would gradually have given the ladies a costume that sculptors would have delighted to carve and painters to paint, instead of borrowing the effete dress of an age which Carlyle describes as bankrupt in everything. It is difficult for us in the present day to realize the effects of bright colours seen in masses, but I well remember on one occasion seeing an assemblage of Turkish ladies on a quay of the Bosphorus. The form of the dress was not at all unlike that which prevailed in our own country during the reign of Edward I.; the dresses themselves were of almost every conceivable colour under the sun, and being quite new were rather gaudy; but the effect of the whole was most wonderful, resembling an enormous moving flower-bed filled with the most brilliant flowers. A mediæval holiday crowd must have been even more gorgeous, for there the colours were varied by embroidery. Now can any one question that these frequent assemblies of beautiful colours are without their due effect upon the eye of the designer, and that it is all the same to him whether he sees crowds such as we see in London or such as we may view on the Bosphorus? Unfortunately it is very questionable whether the present generation is likely to see any great amount of colour used in costume, for fashions in this respect change nearly as slowly as architecture.

The third impediment to our progress is the want of a more extended teaching of the figure. Up to very lately there seems to have been a very great reluctance in almost every profession connected with the fine arts, except in those of painting and sculpture, to teaching pupils the human figure, and even where better things were to be expected it is usually the last thing the pupil attempts, whereas it ought to have been the first, as soon as the beginner has understood the value of a curve and learnt a little perspective.

So important, indeed, is this acquisition of the power of

drawing the human figure, that there is scarcely a trade or profession where the designer or artisan would not find it of the very greatest assistance; and even in architecture, which to a certain degree would seem independent of it except as an accessory, it is the only way of giving the pupil that power of judgment which is generally called good taste.

As to the designer for manufactures, he would do well to remember what no less a man than Haydon said upon this point, namely, that a man who could draw a head could draw a leaf, but that it by no means followed that the man who could draw a leaf could draw a head. At present it must be confessed that we are lamentably deficient in this branch of drawing, and therefore we find designers introducing the figure as little as possible in their compositions: but indeed they are hardly to be blamed, for if they did introduce it they would find almost insuperable difficulties in getting it executed by the artisans at their disposal. It is true that help is occasionally obtained in this difficulty by the employment of young artists, but the present system of exhibitions of easel pictures makes the first steps in their profession so much of a lottery that they can hardly be depended upon for any continuous work. Thus a young painter does not sell his pictures, and is willing to work, say for a stained-glass manufacturer, at the rate of a guinea a-day. Suddenly, however, by some good luck one of his productions gets hung on the line at the Academy, and is bought by some great picture-dealer. Our friend then bids adieu to his former client, and forthwith turns up his nose at cartoons or wall-painting, and paints nothing but easel pictures. Nor does the evil end here, for all his contemporaries seeing his success naturally go on painting similar easel pictures, in the hopes of the same good luck, and also despise cartoons and walls, to the great detriment of art in general and of the manufacturer in particular, who is thereupon obliged to fall back on his regular designer: which brings us to our former conclusion, that he (the designer) is the man to catch hold of and educate up to the mark; and if we want to do this, the most effectual method is to teach him the figure thoroughly.

What, then, are we to do in the present state of things, when we labour under such serious difficulties as the want of a distinctive architecture, of local colour, and a sufficient teaching of the figure.

The first two evils can only be cured by time, for sudden revolutions are seldom if ever made either in the architecture or in the costume of a people. The only consolation we have is the very poor one that our rivals labour under exactly the same disadvantages. But if we are powerless to control the two first, the remedy for the third is entirely in our own hands. We can increase the number of Government Schools, and we can render them more useful by taking up the artisan, and teaching both him and the designer the human figure a great deal more.

It is also possible to greatly ameliorate the public taste by establishing local museums, not only in the provinces but in London itself, where considerable portions of the Kensington Museum, or duplicates where attainable, might be exhibited and changed at stated periods, say every three or six months, so that the idler who drops in for half-an-hour might periodically have the chance of seeing something new. This, it is true, might slightly diminish the number of visitors we find so constantly advertised in the papers as enjoying the advantages at the South Kensington, but still that Museum would always remain the Mecca of designers and sight-seers. Probably also some relaxation might be made in cases like the present, and Societies who are helping in the same work might have the advantages of obtaining, by payment of a small fee, objects from the Museum to illustrate their lectures. Had this been possible at the present time I need scarcely say how happy the Society of Arts would have been to have taken advantage of it for the illustration of the lectures with which I intend to follow the present. I trust, however, that I may be able in some degree to supply the deficiency, and to shew you sufficient to illustrate what I may have to say; but even then the best advice I can give is to go through the turn-style and judge for yourselves.

My suggestions, however, for our future improvements in the application of art to industry reduce themselves simply to these:

Increase the Government Schools of Design.

Multiply local museums, and render them easy of access.

Educate the designer as thoroughly as possible, but, above all, teach him the figure; and, if you can, catch the artisan and teach him as well.

As to style and costume, they are beyond our control, and must be left wholly to time and Providence.

GLASS.

Before entering on the subject of the present lecture, it may be as well to say a few words as to the manner in which I propose to treat the various arts mentioned in the programme.

There are two great uses of antiquarian studies. One of them is to enable us to conjure up as if by the magician's wand the dress, furniture, architecture, &c., of past ages, so that we can live, as it were, in many centuries almost at the same moment. This is a very great and a very pleasant species of knowledge, but it is not particularly useful in this work-a-day world; and it sometimes, like other knowledge, renders its possessor far from happy, more especially when he goes to the theatre, and sees all sorts of anachronisms and impossibilities[a].

The other use of antiquarian studies is to restore disused arts, and to get all the good we can out of them for our own improvement: this is the light in which I propose making use of it in the present lectures. I shall, therefore, not give a continuous history of any one art, but take up one or more phases of it when it was most flourishing, and when we can learn most, and so compare what was done then with what is done now.

In considering the art of glass-making we may at once omit the well-known story of the discovery of it by the Phœnicians, as told by Pliny[b]; it may, or may not be true; most probably it is not true: at all events it does not matter to us. What is important to us to know is, that the Egyptians are supposed to have made glass from a very early period; that the Phœnicians pro-

[a] One glaring error in costume I have observed perpetrated everywhere in the most unblushing manner, even in places where the rest of the costume has been tolerably correct, and that is the way in which the shield is held. Anciently, the knight supported his shield on his bended arm: one strap secured it to the upper part of the arm, and the left hand grasped another strap in the dexter corner. At the theatre, and in popular woodcuts, the shield is invariably held on the straightened arm, so that the first blow would probably break the limb or dislocate the shoulder. This is only one example out of many, and it is easy to see why a theatre is not quite the place to make an antiquary happy.

[b] Nat. Hist., bk. xxxvi. ch. 65.

bably learnt it from them, and, availing themselves of the very excellent sand of their country, established manufactories, principally at Sidon, which Pliny tells us was formerly famous for its glass-houses [c].

Now it is well known how the Phœnicians were the great commercial nation of ancient times as much as we are in the present, and one of our most distinguished antiquaries, Mr. Franks, is of opinion that those beautiful glass bottles found in such profusion in Italy, Syria, Sardinia, Greece, and the Greek islands, are in reality the products of the glass-houses of Sidon, and that the various shapes were made to suit different customers, those for Greece being the most elegant. These vases are generally of a dark-blue colour, decorated with pale yellow, blue, green, and white lines disposed in zigzags; these lines do not go through the glass, and have evidently been put on the surface, and worked flat, before the vessel was blown. The zigzag appearance might have been obtained by pulling the paste various ways while hot and before its being finally blown, which process, from the flutes, might possibly have been done in a mould. These little bottles, specimens of which are found in most collections, are supposed to have contained perfumes. Now just contrast them, with their beautiful and yet deep-toned colours, supported on little golden stands [d], with the modern fashionable smelling-bottle, a polygonal cylinder of transparent glass, finished at each end with an ugly gold top ornamented with hideous engraving.

We now come to Roman glass. It is usually the fashion to believe that the Romans had no glass at all, the consequence of the wretched books on Greek and Roman antiquities which until of late years were exclusively current in our schools. A hundred years ago they represented the knowledge of the times, painfully picked out of the classics by such men as Erasmus and Scaliger. But since those days Pompeii has been discovered, archæology has become a science, and we read the classics with very different lights to what our forefathers did. We shall therefore find, if we pursue our investigations into ancient glass by means of the contents of the public and private collections, that the Romans were as well off, if not more so, in

[c] Nat. Hist., bk. xxxvi. ch. 66.

[d] A little vase with its golden stand may be seen in the British Museum.

this respect than ourselves. It is true that hitherto no such large sheets of plate-glass have been discovered as we see in fashionable shop-windows in Regent-street and elsewhere, but plate-glass in very considerable pieces has been found, and the article must have been in very considerable use, as anybody may see, at Pompeii, where there is a piece remaining *in situ* closing the window of a porter's room in one of the houses: we must, moreover, remember that Pompeii was by no means a very important place, being a sort of Roman Margate. Pliny also tells us that in his time glass drinking-vessels superseded those of silver and gold. Let us now see what the Romans have left us. First of all, we have colourless glass, which Pliny informs us was in his day considered as the most valuable. This white glass was decorated in various ways. It was sometimes crackled: thus in Mr. Slade's collection there is a cup which has artificial cracks all over it, and exactly resembles the white fluor spar—a curious fact when we remember that some antiquaries assert the murrhine vases to have been made of the coloured fluor spar, or what we call blue jack.

The Roman workman was also perfectly master of the art of making what we term filagree glass, and what the Venetians call *latticinio*. In the British Museum, in the Temple collection, will be found a saucer made entirely in this manner, and exactly like Venetian work. It is needless to say that the Romans produced all sorts of coloured glass, both opaque and transparent, some of exceeding beauty: thus the glass dish known as the Santo Catino, and kept in the cathedral at Genoa, was believed in the Middle Ages to be an immense emerald. It was taken by the Crusaders at the siege of Cæsarea in 1101, and the legend ran that it had been given to King Solomon by the Queen of Sheba; that it had contained the paschal lamb eaten at the last Supper of our Lord; and, finally, that it had received His blood: in fact, it was the Sangreal, so celebrated in the *Mort d'Artus*. Many of these coloured glass vessels have been turned on a wheel, or cut and polished afterwards. In the collection of Felix Slade, Esq., is a vessel of Greek glass, in the shape of a boat, which has been thus finished, the colour exactly resembling the Santo Catino. Very frequently different-coloured glasses were used in the same vessel, sometimes in an irregular manner, as in the imitations of onyx, or in those examples which resemble the Venetian *smeltsh;* but

often the various colours were cut into strips, placed side by side, and then blown. Sometimes sections of rods of intricate patterns were placed side by side and imbedded in a different coloured paste, and then blown, resembling the Venetian *millifiori.* At other times the more precious marbles were imitated in a similar manner: thus we find very fair imitations of serpentine and porphyry. Again, mosaic patterns were made by putting together various-coloured rods so as to make one large rod, which was then drawn out until the pattern became very small; slices were then cut off it and joined together at the sides until a piece of the required size was obtained. Occasionally the artist went a step further, and designed a head, or more commonly half a head, which underwent the same process, the two sides being afterwards joined together, and the whole set as a gem. Still more curious was the process in which a figure was engraved on a piece of glass, and then other coloured glasses pressed in the hole in a state of fusion, or else applied in powder and fused like enamel: frequently a very fine line of gold divides the two colours. The Romans were well acquainted not only with the art of gilding glass, but of enclosing it between two thicknesses; it occurs in many instances in the form of a strip among other strips of coloured glass; but its great application is in the so-called Christian glass vessels, (although some pagan ones have been found). A piece of glass was covered by a gold leaf, and this gold was scratched away by a needle's point so as to form a subject or ornament; the glass vase in a fusible state was then placed upon this, so that its bottom was formed of two layers of glass with gold between.

The forms of the Roman vases are very various, so much so that I need only mention the perfume-bottles, which are now found blown in the form of heads. Glass was blown in moulds, stamped, turned on a wheel, and engraved, sometimes very rudely, and sometimes as finely as gems: witness the Portland Vase. Here the vessel is made of two layers of glass, and the whole glass which formed the upper surface cut away, exactly as if it had been a question of a large piece of onyx instead of a glass vase. Occasionally it would appear that the outer figures were cast first, and then fixed on by means of a flux, but then the workmanship is by no means so good. Occasionally we find vases with figures blown in a mould, the

glass being double, say a thin coating of white backed up with blue. Another plan was to take a thin vase, put on it strips of another colour, and then cut these strips into patterns: in Mr. Slade's collection is part of an inscription thus executed; but the triumph of engraving is the vase found at Strasburg, and containing the name of Maximianus. Here the vase is in two thicknesses, and the outer one has been cut away into the form of a net, being only connected with the under surface by sundry small pin-like supports left by the engraver when he cut the rest away.

Did time permit, I might enlarge upon the many purposes to which the Romans applied glass. Thus at Pompeii there is a fountain decorated with mosaic such as we see in the Middle Ages[e]. Large slabs of glass have also been found which were probably employed to coat walls instead of marble. Many of the designs of the most exquisite antique gems are preserved to us by means of the glass casts, where the originals have utterly disappeared. Engraved or cast glass was frequently set as gems in rings; it occurs in necklaces, and was the material for bracelets; dice were made of it, and finally there exist in collections glass coins with Cufic inscriptions.

The Romans also claim, if we may believe Pliny, Suetonius, and Petronius Arbiter, to have invented malleable glass, which no modern has ever even attempted. Most probably this malleable glass was only a common fable, although they lived sufficiently near the time of the occurrence to have been able to investigate the matter to a certain extent. After all this, I do not think we can say the Romans had no glass; on the contrary, I am afraid that we shall be obliged to confess not only that they did have glass, but that their glass was far more beautiful and artistic than our own, certainly as regards colour.

Now let us see what the Venetians did.

In the middle of the fifteenth century the Venetians, by means of their commerce with the East and their relations with the Byzantine empire, had made such progress in the art of glass-making that the fall of the latter empire, by attracting new workmen, put them in possession of all the Byzantine arts of enamelling, gilding, and colouring glass, which had been handed down from the times of the Romans. Thus the

[e] There is a piece of antique glass mosaic in the South Kensington Museum.

Venetian glass considered the earliest by the antiquaries is generally blue or green, with enamelled figures on the bowls. The gilding is most artistically put on, generally in the form of imbrications or feathers; and moreover, a large quantity of little bits of coloured glass, representing jewels, is placed upon the gold. The feet are generally blown in a mould, and the forms of the vessels and the costume of the figures exactly resemble those seen in printed books and manuscripts from 1460 to 1480. The next development is in plain glass, with the same sort of imbrications and jewels, and the same sort of enamelling, but the form is changed, and become antique, but still, if anything, even more beautiful than the former. Those that have come down to us appear to have formed part of dessert services, in the same manner as the Henry II. ware, and the wonderful service of crystal and jewels once belonging to Lorenzo de Medici, and now partly in Florence and partly in Paris[f].

Somewhere about the end of the fifteenth century or the beginning of the sixteenth the Venetians discovered, or, to speak more correctly, revived the art of the filagree glass. This, like the Roman, was effected by means of the extension of a number of rods of transparent white glass, containing others in a different colour, generally opaque white: hence the term *latticinio*. These rods were combined in various manners, and then blown exactly as we have seen the Roman glass; sometimes they are twisted and then blown; sometimes the twists go different ways (but then this was done by doubling the glass); sometimes the filagranes alternate with strips, also in this respect imitating the antique; sometimes sections of rods are embedded in another glass—this is called *millefiori*, and is exceedingly pretty. The *smeltsh* consists of pieces of different-coloured glass, flattened and pulled out, joined together, and backed up by a reddish-coloured paste. This, when there is plenty of aventurine, or rather the glass imitation of it, is very beautiful. Another method was to take a vase of opaque white glass, and then sprinkle it with little bits of other coloured glass, which subjected to heat became melted and produced an effect not unlike china.

The opal glass is also very beautiful, so is the crackle glass,

[f] The collection of F. Slade, Esq., contains some excellent examples of the early Venetian glass, and indeed of every other kind.

which by the way is well imitated in the present day. Occasionally we see glass vessels with knobs of other colours put on the outside, and sometimes with little flowers. Gold is freely employed; generally it is put on the surface, and if in large quantities a pattern is obtained by scraping it away, before burning, with a needle's point. In other cases it is put on very thinly, so that it looks like a dust, and avoids giving a heavy look to the glass; a favourite way of employing it is on the small stamped heads, so often found attached to the sides of the vase or to the stem. In nearly all these glasses the upper part is blown into a most elegant shape; though occasionally the lower part must have been blown in a mould: the stem is made in two ways; if decorated with heads, it is blown in a mould and afterwards gilt, but often it is made of strips of glass most wonderfully twisted and worked up. Engraving and enamelling were occasionally employed to heighten the effect, but in later times the glass-makers directed their attention more to the production of the filagree patterns than any other. The process was kept, or rather tried to be kept, very secret—so much so that a law existed which enacted that, in case of a glass-workman going to work abroad, in the first place he should be asked to return, and if he paid no attention his nearest relatives should be imprisoned; if, however, he still held out, some one was to be despatched to kill him.

There are few things more elegant than the forms of these Venice glasses, which were made in vast numbers during the sixteenth and seventeenth centuries, and exported to every country in Europe. Unfortunately, in the eighteenth century the taste for imitation of crystal came in, and the end of that century saw the death of the industry at Venice. Of late years it has been revived, but the workmanship is very clumsy compared with the old, or indeed with the more modern productions of other countries.

While the Venetians were working at filagree glass other countries were producing other varieties. Thus Germany took to the enamelling of glass, and most collections can shew one or more tall beakers decorated with the pomp of heraldry, a peculiar weakness of the German mind in the sixteenth and seventeenth centuries. The Germans were also very famous for their engraving on glass. They also occasionally attempted filagree, in spite of the terrors of the Venetian republic. Thus

a vase in Mr. Slade's possession is supposed to be of German workmanship. It is a bowl composed of plain glass, with a very few radiating strips of filagree, but in each plain compartment is a section of a compound glass tube, but so drawn out as to resemble a fruit, or flower, or insect.

Now would it be asking too much of our modern manufacturers to look carefully at the old Roman and the mediæval Venetian glass, and give us a greater variety in our choice than they do at present? If we go into a large glass-warehouse we see some very elegant forms, but no filagrane, no enamelling, no *millefiori*, no *smeltsh*, and no imitation onyx. What we do see is transparent glass, often exceedingly well engraved, and occasionally gilt, but still not in the artistic manner of the Venetians. On the contrary, we never see the Roman practice of putting the gold between two layers of glass. I believe, however, that it is a mere question of fashion, and that we can do everything in glass that has been done except the rendering it malleable. A few years ago filagree stems were the fashion, and they are even still occasionally to be met with. Our glass is heavier, it is true, than that of the Venetians, but that is occasioned by the introduction of red lead to make it more brilliant for cut work. It can, however, be made nearly as light as the ancient by leaving out the lead. I believe that if we are to have any progress we must have for a time all the various branches practised under one roof, for when it is necessary to send the glass to one man to be engraved, to another to be gilt, and perhaps to a third to be enamelled, we can hardly expect much progress. Division of labour is a very good thing, but it should be applied to arts and trades already well known, and not to those to be learnt. In the latter case, every process should be carried on under the same roof.

I believe it would really do an immense deal of good if any one were to order, regardless of expense, a dessert service, either like the early Venetian glass, or, still better, like the Roman glass; in the latter case we should see new forms applied to the old material and colour, and perhaps hit upon something new.

The second point to which I wish to draw attention is the manufacture of stained-glass windows, for the production has really assumed the status of a manufacture. Now it is by no means an uncommon occurrence to be asked by people of

an enquiring turn of mind, why modern stained glass is not as good as the old? and a few words were also formerly dropped about the lost arts. Now the answer is rather a long one, and involves a slight sketch of the different kinds of ancient window-glass, and an account of what has been done to improve the material of late years.

There appears to be a sufficient amount of historical evidence to induce us to believe that the windows of St. Sophia at Constantinople were decorated with this material; if so, they were placed, according to M. Salzenberg, in the marble reticulations which anciently filled up the window spaces: the pieces of glass appear to have been of a considerable size, and the effect must have been that of a transparent mosaic.

A similar arrangement still prevails in the East. A pattern somewhat resembling what we should call a shawl pattern is made by V-shaped plaster mullions or divisions, the point of the V being on the inside. These V mullions are of different projections, according to their importance in the lines of the pattern; at the back of them is placed, by the aid of a little plaster of Paris, coloured pieces of glass as thin as an egg-shell. Of course every step the spectator takes the perspective of the pattern becomes altered, and the window appears an assemblage of the brightest jewels. The thin egg-shell glass is protected from the weather by a similar window, of much coarser work and much stronger glass, flush with the external surface of the wall, and as the said wall is generally thick there is a considerable space between the two.

On the contrary, in Europe during the Middle Ages the glass was very thick, and connected together by means of lead. The windows were executed in various manners, each of which again varied with the development of architecture. The richest kind is what is known as medallion glass, where sundry medallions containing histories are placed on a mosaic ground, the whole being surrounded with an elaborate border. Such are the windows in the aisles of Chartres Cathedral; and this sort of glass from its intricacy is almost always confined to situations where it could easily be seen: the higher windows, on the contrary, contained figures under canopies. A third variety is where white glass forms the body of the windows, with just sufficient colour introduced to give it a variety. These are the three great divisions, but they might be almost infinitely subdivided,

figure glass being often found mixed up with *grisaille*, and medallion with figure, &c. Some years ago, when the art began to be revived, people who had an eye for colour very quickly found out that the modern glass was very raw and gaudy compared with the old; it was then discovered that the ancient glass was very streaky, or, in other words, very badly made, and frequently had a slight toning. The glass-stainers took the hint, and tried to get the streakiness with acid, and the mellow tone by dirtying down nearly the whole surface with enamel. But somehow or other, the windows looked only dirty, and would not look mellow; when it was resolved to look at the texture of the old material, which ought to have been done at first. At this juncture my friend Mr. Winston came to the rescue, and after he had made most elaborate analyses of the old metal, glass of the right sort as regards material was produced by Messrs. Powell, of Whitefriars. Unfortunately, somehow or other, it is still made too well, only parts of the sheets being streaky, so that when a window is wanted wholly made-up of this kind of glass, it is apt to be rather an expensive affair; the only question is, whether by perseverance it would not be possible to make the whole of the sheet streaky. Having now the glass, the next point is to get an artist. Formerly the art employed on our modern windows was of a very low order, the only aim being to copy old work, defects included, as completely as possible; and here again we have to thank Mr. Winston, who has never ceased to raise his voice against bad drawing and bad colouring in stained glass. Messrs. Powell again seconded him by securing the services of Mr. E. B. Jones, one of the pre-Raphaelite painters and one of our best colourists, to make coloured cartoons, which were to be exactly copied by the workman as far as the material would permit. In his first cartoons Mr. Jones used no lines to mark the details, but contented himself with the leading: in his subsequent works, such as the cartoons for Oxford Cathedral, Waltham Abbey, and that executed for Messrs. Lavers and Barraud, he has availed himself of enamelled lines. Probably his first method would have succeeded better, if instead of joining the glass with lead he had been able to use plaster mullions, in the Eastern fashion. In all these works there is an immense variety of colour, no two pieces being alike: hence the necessity for streaky glass. Mr. Jones's cartoons are intended for windows near the eye,

those which have to be placed at great heights requiring a much simpler treatment; but although the colours in this case are more massed, still each piece of glass should be of a different tone if we want to obtain a jewel-like effect. The windows in the cathedral at Florence are a proof of this, and look as if made of slices of immense jewels, in contradistinction to the Eastern ones, which have the appearance of being composed of a number of very small gems. Other artists have drawn for stained glass, for example, Messrs. Poynter, Westlake, and Holiday, but we cannot expect artists to be always working at cartoons, and we therefore come round to what I stated in my first lecture, viz. that we must educate the paid designer of the manufacturer. As regards the difference between old and new stained-glass windows, if we allow somewhat for age, I think a window designed by Messrs. Jones or Holiday, and executed wholly in streaky glass, is as good as any old one that was ever made; and if we could get an unlimited supply of them, I should certainly not lament the loss of all the old ones, at least those in England and France.

I have still to mention two more applications of glass to the arts, viz. mosaic and enamelling. Mosaic is the art of imitating cartoons by means of small tesseræ of opaque glass fixed into plaster. The glass is made in the form of small flat cakes about half-an-inch thick, which are broken into tesseræ by being struck between two steel hammers or chisels, the lower one being fixed. If the mosaic is to be placed high up, the broken surfaces are exposed, thus getting an infinite play of light, and giving texture to the composition; if, on the contrary, the work was on a level with the eye, say a border to a marble pulpit, the flat and polished side is placed uppermost. The gold is produced very much in the same manner as in the antique Christian vases, viz. by placing it between two thicknesses of glass, only in this case the lower one is a quarter-of-an-inch thick, while the upper one is as thin as a hair. This upper surface is executed in two ways. One is by covering the gold with a sort of glaze, which was afterwards fused[g]; the other is to put on the upper surface in the form of a thin sheet. At the present day the glass cakes for mosaic, as well as the gold, are made at Murano; and most people will remember the

[g] See Theophilus.

beautiful specimens exhibited by Signor Salviati at the International Exhibition. This gentleman has now in hand sundry mosaics for the vaulting of the tomb-house at Windsor. Messrs. Powell and Mr. Rust have also produced both the coloured and the gold mosaics, and with them several essays have been made by Mr. Fisher. The ornaments have been executed in the ordinary manner, but the tesseræ of the heads are simply portions of square glass rods broken off; a good deal of labour is thus saved, and at a distance the effect is much the same as if the material had been chopped out in the ordinary manner. In this case, as in stained glass, it is very desirable to vary the tones of the different colours, more especially the gold, which it is perfectly possible to make too well. It is much to be wished that this beautiful and very lasting kind of decoration should be more generally employed, but I am afraid that this will not happen until the cost of execution is brought down to something like that of stained glass. At present the gold is excessively dear, and of course retards this consummation, for the gold is a most essential ingredient in all mosaics for architectural purposes. We must hope, however, that this difficulty will be got over in time.

The last application of glass I shall notice is that of enamelling. At present, when we see it only used for jewellery and clock-faces, it is difficult to conceive it to have been the subject of an extensive art-manufacture; but such it was formerly, when the town of Limoges alone produced almost innumerable specimens, and such it must have been in China during the last two centuries.

There are various sorts of enamel, all of which have been more or less extensively practised in all ages. The first and simplest is where the ground of the metal is scooped out, and the enamel—of which the base is crystal coloured with metallic oxides, put in in the shape of powder, or of a paste, and then fused and polished; the visible surface of metal in this case generally being copper-gilt. This is the sort of enamel produced during the twelfth and thirteenth centuries in such quantities at Limoges, to say nothing of other manufactories in Germany. All sorts of articles were made of it and exported, from marriage-coffers and horse-trappings up to large tombs. We know that one of the latter was actually imported into this country for Rochester Cathedral, and there is little doubt but that the

monument of William de Valence in Westminster Abbey comes from the same source.

In the fourteenth and fifteenth centuries silver was much used as the ground for enamels; then the vitreous pastes became transparent, and the works altogether much finer. The Italians, indeed, had a process of covering a very slightly raised subject with coloured enamels, which has a most beautiful effect. But to execute these demanded a first-rate artist to do the raised subject, and a most skilful enameller to prevent the enamels, when in the act of fusion, from running into one another. In fact, it was part of the goldsmith's art, and was never produced in sufficient quantities to become a trade.

A third method of enamelling was to form the pattern of thin strips of metal placed on their edges instead of scooping it out. Most European enamels of this kind are executed in gold, and are of ancient date, like the *pallo d'oro* at Venice, or the cross in the possession of Mr. Hope. Many of the enamels employed are also transparent. If, however, we look at the Chinese enamels produced in such quantities during the last two or three centuries, we shall find that they are nearly all produced in this manner, the metal being copper. It is almost impossible to enumerate the various objects made by this nation of enamelled copper, but every new importation brings to our notice some new application of it. I believe the Chinese themselves say that they received the art from the barbarians, and that at no remote antiquity; the earliest date I know of being 1475, marked on a vase, one of the spoils of the Summer Palace.

In the beginning of the sixteenth century the good citizens of Limoges revived their trade in enamels, which had quite fallen away; but then they took up an entirely new process, better suited to the prevailing architectural taste. The vessel to be ornamented was made of thin copper, then covered with black enamel, upon which most delicate figures and ornaments were executed in white. This of course was a far more artistic affair than their former process, and in all probability they did not produce anything like the same number of objects, but still it was a trade, and a great quantity must have been turned out, for the manufacture only ceased in the last century.

Of late years several attempts have been made in France to revive the art of enamelling as applied to considerable-sized objects, and in some instances with great success. Thus one artist

imitated a quantity of the late Limoges work with such success as completely to deceive a celebrated collector, and obtained the honours of a lawsuit. Last year I had the pleasure of visiting the atelier of M. Legoste. His process, which is founded on the early Limoges school, consists in casting the copper instead of scooping out the pattern; but the great difficulty is to so mix up the enamels that they shall all flux at the same temperature. The enamels shrink during the firing, and have to be filled up and fired again. This process is very tedious; so much so, that the artist considers himself very lucky if it only occurs three times. In a circular article the fusing and firing is done in portions at a time, the other parts being protected by loam. A great deal of labour is saved by the casting process, and the works of M. Legoste are therefore comparatively cheap. He is also his own designer, and a very good one too; the only defect being a little sharpness in the colours, which is at once seen when comparing them with ancient or Chinese work. But what can be expected from a modern European, who lives without any surrounding colour?

I think it will be agreed that there is a pretty wide field open to the manufacturer even in glass, and its various applications; and as we have got stained glass as good as the old, let us hope that some day we may have drinking-glasses rivalling the Roman, and enamels which surpass those of Limoges, both of the early and late school.

POTTERY.

THE whole history of pottery is so well known, and has been related in so much detail by various excellent authorities, that it appears almost hopeless to make even such an abridgment of it as may suit the purpose of these lectures. It is also the most advanced of our art industries, for nothing can be more beautiful than the pottery, china, and earthenware made for the use of the upper ten thousand. Unfortunately, however, art has not been much applied to those objects in pottery of which we are compelled to use a large quantity, and we accordingly find ourselves in this dilemma—if we buy a beautiful thing it is very dear, if a cheap one it is often very ugly.

The painted Greek vase, as we shall see, was a valuable article, and corresponded to our better sort of china; but the unpainted vessels were made in equally excellent forms, the distinction being the painting, the finer clay, and the greater care in the manufacture. While I can, therefore, find very much to say on the subject of what has been done and what is doing in the manufacture of pottery, I shall have much less to suggest as to what remains to be effected; beyond putting in a plea for a greater employment of mechanical appliances to first-rate designs, so as to secure much smaller though remunerative prices. And first of the Greeks.

In the tombs scattered over Italy, Greece, and the Greek islands, it is by no means unusual to find beautifully painted vases disposed around the body, or hung up at the sides of the walls. If the tombs were small, as in Greece, the vases are also small, and we consequently find the largest and finest in Etruria and southern Italy, where it was the custom to bury rich persons in sepulchral chambers. These vases are generally of a lightish red earth, painted in blackish brown, yellow, white, and red; sometimes they hold ashes, and sometimes small objects which the owner used in life. In a state of society when it was considered fashionable to bury the warrior in his armour or the lady in her dress and jewellery, it can very easily be understood how the more valuable household vessels cor-

responding to our china would be enclosed in the same tomb. That they were considered valuable anciently is proved by their being found repaired with lead or copper rivets. In later times, when the manufacture had ceased, they were extracted from the tombs very much as in the present day, and, according to Pliny, they commanded very high prices. Of late years the examination of the ancient sepulchres has been carried on in a more systematic manner, and in Mr. Birch's work will be found the calculation that the museums alone of Europe contain somewhat about 10,000, to say nothing of private collections[a].

The manufacture of these vases began at the earliest periods of Greek civilization. It then appears to have spread itself wherever they colonized, and finally to have ceased about a century before the Christian era, the decline dating from the conquest of Persia by Alexander, which brought from Asia a great quantity of the precious metals into Europe, and thereby introduced the more general use of gold and silver vessels instead of earthenware.

Antiquaries have taken great delight in dividing and subdividing the Greek vases into various styles and periods, but the best and simplest method is perhaps that adopted by Mr. Oldfield in the arrangement of the vases belonging to the Temple collection in the British Museum, and I have therefore made use of his dates in the following account.

First period, 550 B.C. Early Archaic. Light buff ground, figures in brownish black, lines of details incised, and sundry parts touched up with a purple red. The subjects represented are ornaments and Asiatic looking animals, the human figure being rare. These vases are found in the Greek islands and at Nola.

Second period, 550—450 B.C. Good Archaic. Ground red, with slight glaze or polish, black figures, incised details, white and purple touches. Great number of figures, the male flesh black, but that of ladies painted white. The drawing is exceedingly accentuated, and altogether has a decorative appearance, the figures being rather stiff. The subjects are the Trojan war, Greek myths, and stories of Bacchus. The forms of

[a] History of Ancient Pottery. By Samuel Birch. (London: Murray. 1858.)

the vases are accentuated and sharp, and they are found chiefly in Italy, particularly at Vulci.

Third period, 450—350 B.C. Black ground, fine glaze or polish, superior execution, and beautiful drawing; hardly any white used. The story is told in the best way, and with few figures. The form of the vases is also excellent. This is the best period of all. Examples are found chiefly in Italy, particularly at Vulci and Nola.

Fourth period, 350—250 B.C. The decadence now begins. There is still the black ground and red figures, but the execution is laboured, the folds of the garments are multiplied, and the compositions more elaborate. We find a great deal of white employed, also gilding, and even other colours. The forms of the vases also become bulbous, and weaker than during the former period. Still some very beautiful works must be referred to this division, particularly the vase now in the British Museum, and engraved in the third number of the "Fine Arts Quarterly," with a description by Mr. Newton.

Italy, North Africa, and Greece are the countries which principally afford us the works of this period. A variety, however, is peculiar to Athens. Here the vessels are formed of whitish clay, and the subjects are executed in many colours, blue and green included.

The fifth and last division extends from 250—150 B.C., and exhibits a most decided falling-off, its principal characteristic being a great quantity of white [b].

The manufacture of the Greek vases must have demanded a great amount of skill, firstly in the preparation of the clay, and secondly on the part of the potter, for they are exceedingly light as compared with their bulk. Pliny tells the story how a potter and his apprentice tried who could turn the lightest vase, but does not inform us which of the two succeeded; we only know that both vases were placed in the temple of Erythræ.

Some parts of the ornaments, such as could not be formed on the wheel, were moulded or modelled, and afterwards attached to the body. Antiquaries appear to differ very much as to the subsequent processes. Most probably the vase was

[b] In the above description I have taken advantage of the kindness of A. Franks, Esq., who not only afforded me every facility for the examination of the vases, but communicated the results of his own experience.

dried in the sun, the figures pounced, and afterwards drawn on it, and the whole then baked; it is, I believe, still a question whether the polished surface was given by a glaze or by mechanical means. Doubtless many of the masterpieces of antiquity, did we but know it, have been handed down to us in these paintings, much in the same manner that Raphael's designs were copied on the Italian majolica, or those of modern masters on the Sevres china.

Although found in tombs, very few of the Greek vases appear to have been made for that especial purpose; on the contrary, they are nearly all for domestic use, and also we must remember that the ancients employed vases in many cases where we moderns make use of casks and tubs. Again, the whole economy of the dinner-table was different. They did not drink strong wines poured out of heavy decanters into little glasses. On the contrary, the wine was brought up in an amphora, mixed with water in the crater, a large vase with an open mouth and handles; it was then ladled out of this by means of the cyathos, a vessel like a teacup with one very long handle, and drank in the scyphos, cylix, phiale, and rhyton, the latter being shaped like a horn, and ending with the head or forepart of some animal[c]. Like the glass drinking-vessels of our Anglo-Saxon ancestors, it also possessed the somewhat equivocal advantage of requiring to be completely emptied before it could be set down. Other vessels were made to hold wine, oil, figs, honey, &c.; others for carrying, or more probably for holding water—these are beautifully decorated; others, again, for perfumes: in fact, there are as many forms and as many uses as we find in the Italian majolica or in the modern china.

These vases have often been imitated in modern times. Thus there is, or was, a manufactory at Naples. Wedgwood also made copies, and Mr. Battam does the same at the present day; the principal use of which, if use it can be called, appears to be the decoration of the tops of bookcases, where it is evident that the painting must be too far away from the eye to be appreciated. Could it be made into dessert services or flower vases there would be an evident use, although even then one would be inclined to ask what we have to do with Greek myths. It is only fair to Mr. Battam to say that he has drawn the

[c] Birch.

designs of Flaxman on his vases, but still I should much have preferred to have had scenes of our every-day life depicted, had we but a costume fit for the purpose; and as we do not put our wine on table in craters, I do not very well see the object in making vases that we cannot use. At the same time, it cannot be denied that the student may learn a vast deal as to the arrangement of figures from old vases. The same great principles which guided the Greek paintings on pottery will be found useful in the arrangement of figures on plain surfaces, such as mural decoration, incised pavements, or mosaics. The short-hand way of drawing the figure also deserves notice.

The Romans did not by any means possess so artistic an article for the dinner-table as the Greeks. Their best sort of pottery is what is known to antiquaries as the Samian ware, although in reality the Italian specimens appear to have been manufactured at Arezzo. The kind so extensively found in Britain and elsewhere is said to have been imported from Germany and the eastern parts of Gaul: and if an importation, it must have been an article of very considerable importance, as specimens of it are found wherever the Romans have had a settlement. It is very hard, and of a bright red colour, like sealing-wax. The vessels were made on a wheel, and often turned on a lathe, the ornaments being formed in moulds and afterwards attached, and the whole covered by a thin delicate glaze. The ornaments consist of leaves, scrolls, animals, birds, architectural features, and figures, executed in rather a coarse style of art.

I do not know that imitations of this ware have ever been made an article of commerce; the last century, however, produced a good deal of dark red ware resembling the Japanese. But before we leave the ancient world it will be as well to say something of the productions of our countryman, Wedgwood. Wedgwood is principally known in the present day as having invented and made that wonderful ware which now commands such high prices. Although breathing a great deal of the antique spirit, very little, if any, is a distinct copy from old works in pottery. But then Wedgwood could secure the services of such a man as Flaxman, who was almost more Greek than the Greeks themselves. And here again we have to regret that, to employ his powers, such an artist should have been compelled, as it were, to live in another age.

Wedgwood, who was a self-made and self-educated man, effected his great discoveries between 1760 and 1762, when he brought the aid of chemistry to his manufacture. Luckily he had a partner who was well versed in the fine arts, and who procured him ancient gems and works of art to study.

Among the various descriptions of Wedgwood we must admire the black Egyptian ware, and the more common blue jasper, as it was called. The paste of which these were made was a porcelaineous biscuit, which was capable of being coloured throughout with metallic oxides, white figures relieving the monotony in most cases. It was thus that he imitated the Portland vase, using a glaze over his ground to imitate the glass of the original. Fifty copies were made, and sold for fifty guineas each. All sorts of vessels and ornaments were made in this blue and white ware, some pieces even being set in gold as jewels, although their half dull surface too much resembles that of the skin to be effective.

At the present day the manufacture is still carried on by his descendants, the old moulds being re-used. The principal differences consist in the figures, which are not so carefully cleaned up as in the original work, and in the colours of the grounds, which are much sharper; the old ones, whether they are blue, green, or drab, being always harmonious and pleasing to the eye.

We now come to the pottery of the Middle Ages. This is not the place to discuss whether the Pisans imported the art after the conquest of Majorca, or Majolica (hence the name), in 1115, or whether it was gradually introduced from Sicily. However that may be, the Arabs or Moors appear to have been able to cover earthenware with an opaque stanniferous glaze, and to decorate it with what are usually called lustre ornaments, viz. colours mixed up with an iridescent glaze. The Italians appear to have lost the secret of the opaque glaze, which was rediscovered in the middle of the succeeding century by Luca della Robbia, for in the fourteenth century we find them covering vessels of red clay with a coating of white. This red clay ware covered with white is called the Middle Majolica style; but about 1500 the opaque white glaze was again applied to pottery, and Faenza, Urbino, Pesaro, Castel Durante, and above all Gubbio, became famed for their majolica. At the end of the fifteenth century the art had received great encouragement from Frederigo and Guidobaldo,

but in 1530 it received a great impetus by Francesco Maria holding his court at Gubbio and giving his supervision to the works. It was at this time that Giorgio Andreoli was employed, whose signature is found on so many plates. Until lately it was the fashion to regard him as the artist, but as many of the works so signed are in very different styles, the modern opinion, that in the majority of cases Giorgio only put on the lustrous colours, has great probability.

The best period of majolica was from 1540 to 1568, under Guidobaldo II., who not only collected the sketches of Raphael and other great masters, but induced some of the best artists of the day (such as Battista Franco, Raffaelle dal Colle) to work at the designs.

Political circumstances, the general decline of art, and, above all, the extensive introduction of Chinese porcelain, caused the discontinuance of the manufacture at the end of the century, but not before it had produced works which are quite worthy to be placed by the side of those of the Greeks.

It would be almost impossible to describe the wonderful variety of subjects depicted on the majolica. The early specimens are distinguished by the black or blue outlines, white flesh shaded with blue, and, above all, by the beauty of the lustrous colours and glazes.

In later times the art was discovered of applying white in the high lights, and the carnations became consequently much more modelled and altogether differently treated. Arabesques, arms, and portraits may be said to distinguish the earlier works from the later, where we find a much greater employment of figures and stories, although the arabesques are still to be met with.

The uses made by the Italians of the majolica were as various as those of the Greeks for their painted earthenware. Thus some plates were made for the purpose of handing fruit to ladies during a ball: they have often a sunk surface in the middle, while others, with a still smaller sunk surface, were intended as the means of handing glasses. Many of the dishes decorated with portraits were presents to ladies, the said lady's portrait having an inscription setting forth her name, with the addition of Diva or Bella. Most people have heard of the famous bottles in the pharmacy attached to the palace at Gubbio, and which were made by the order of Guidobaldo II. They are now, I

believe, to be seen at Loretto, and contain the most extraordinary jumble of subjects, comprising the Evangelists, Apostles, and Ovid's Metamorphoses. Inkstands, wine bottles, saltcellars, marriage services, toilet vases, wine coolers, &c., are only a few of the forms taken by one of the most artistic industries, whether in form or colour, that the world has ever possessed.

A few words must be said of Luca della Robbia, who died in 1481. Originally a goldsmith, like so many great artists he next turned sculptor, and finally finding that his professional earnings did not come up to his expectations, he set to work to discover, or rather re-discover, an opaque stanniferous glaze, wherewith to cover his works in terra-cotta. In this he succeeded, and his first work is still to be seen over the sacristy door of the Duomo at Florence. The colours are simply blue and white. In his after-work we find green, maroon, and yellow, but still rather sparingly employed compared to the white and blue. Andrea, his nephew, succeeded him, and executed many works, but, as might be expected, not in so pure and simple a style; and other members of the family were working in the first quarter of the sixteenth century. The works of the Della Robbia family, however, can hardly be considered pleasing as regards colour, the great predominance of blue and white giving them rather a crude appearance. But apart from this, nobody can deny but that Luca della Robbia was a great master.

Somewhere about 1542 a certain French glass-painter named Bernard de Palissy, having seen an enamelled piece of pottery, forthwith set to work to do what Della Robbia had done, viz. to discover an opaque enamel for terra-cotta. As our glass-painter was equally ignorant of chemistry and of the art of pottery, it is hardly surprising that he should have taken a very long time in pursuit of his object; in fact, it cost him some sixteen years of his life, but then he obtained honour and fame such as no other potter has obtained, and his works at the present day command almost any price. He was attached to the Court, and worked for a long while for Catharine de Medici and the nobility. Unfortunately Bernard de Palissy chose to think for himself on religious matters, a most dangerous luxury in those days, and accordingly we are not surprised at his dying in the Bastille in 1589.

Palissy is most known by the dishes decorated with the

fishes and reptiles from the Seine and the fossil shells of the Paris basin. They were moulded from nature in plaster of Paris, then cast in clay, and finally covered with the enamel, which by the way is seldom white, and when it does occur it is not so pure as that of Della Robbia. These dishes were not made for actual use, but rather to decorate sideboards. They may best be described as painted reliefs, the colours being yellow, brown, grey, and violet. The undersides are often the most beautiful part of the colouring, consisting of several hues run together and resembling agate or jasper. Palissy exercised his talent on very many other things besides these dishes, but it is by these that he is perhaps the best known. His works comprise the usual saltcellars, ewers, basins, &c., to say nothing of the *rustiques figulines* which were employed to decorate gardens, and which have all disappeared.

One other artistic development of pottery is too well known to be omitted, this is what is called Henri II. ware. Nothing is known of its author, or the place of its manufacture, beyond that the former is suspected to have been an Italian, and the latter to have been situated somewhere in Touraine. From internal evidence we discover that the manufacture began in the latter years of Francis I., and continued through the reign of his son; the material is a fine pipeclay, painted over with very minute coloured patterns, most often black, yellow, or brown, and covered with a yellow varnish. It is commonly asserted that these patterns are produced by incising the ground, and filling it up with other coloured clays, but in all probability they were transferred from copper-plate impressions. In an artistic point of view, this Henri II. ware is most remarkable for the exquisite taste and ability displayed in the forms, little animals and the human figure being frequently introduced. In an antiquarian point of view it is the phœnix of pottery, only a very small number of examples being known, and it is easy to imagine what prices a specimen brings if it ever comes into the market.

Now, nearly every one of the various kinds of majolica and pottery I have mentioned can be produced, and have been produced at the present day in England, thanks to the enterprise of the late Mr. Minton, who has the additional merit of not simply copying old work, but of applying the old processes to new designs. The grand buffet of the Middle Ages has

gone out of fashion, but I can hardly conceive a more beautiful spectacle than a large one of three or four steps well furnished with all the varieties of his beautiful manufacture. Unfortunately the price puts its general use beyond the means of most people except the rich, and fashion rather inclines to gold, silver, or porcelain, instead of to the more vigorous majolica.

Again, could it be produced at a low price, what excellent architectural ornaments might be made of it; the glazed coloured surface would remain uninjured by the rains and smoke, while the ordinary terra-cotta gets black with the bricks. Of course, the delicate manipulation would not be required in large works, and the lustrous yellows and reds might be substituted for the gilding. Probably a greater employment of printing might be made available for the outlines of plain surfaces, the which outlines might be filled up with colour by children. No one of course expects to find beautifully coloured majolica used at hotels, &c., but it is just possible that it might be brought within the reach of the middle classes.

A great development has of late years taken place with regard to tiles, almost every description having been imitated and used in buildings. The Moorish tiles before described are made of yellowish clay, covered with an opaque white enamel, which is decorated with blue and lustrous red colour; in later times these were copied, but the outlines of the patterns are raised, so that each colour is as it were confined to itself. Specimens of both kinds are in the British Museum, as well as part of a mosaic formed of pieces of coloured clay.

In our own country, the usual mediæval red tile had its pattern sunk and filled in with white clay, and the whole surface covered with a rich yellow glaze. Such tiles are found all over the kingdom, the finest being those discovered in the ruins of Chertsey Abbey, and now in the Architectural Museum. The ornaments have more a foreign than an English look, and it is not improbable that the designer may have been a Frenchman working in England, or that the wooden moulds may have been brought from France. The figures are most spiritedly drawn, and one of them bears traces of having been copied from the antique. In many modern imitations of this description of tile, the glaze is omitted, and yellow clay substituted for the white forming the pattern, but the effect of this is not good, for the colours look weak, and the dirt works into them. Godwin of

Lugwardine is perhaps the most successful manufacturer of what are commonly called encaustic tiles.

Occasionally, tiles are found with a pattern simply raised or depressed, and covered with a green glaze; or the white has not been put into a depressed surface, but painted on like a colour.

All these are exceptional cases. One of the most curious pavements I know is at Ely, in Prior Crawden's Chapel, where the tiles are cut into patterns, and glazed different colours, so as to make a kind of *opus sectile*. In front of the altar the artist has executed the temptation of Adam and Eve in this manner.

Tiles in the latter end of the fifteenth century began to be made of painted majolica. At first the colours are blue and white, but afterwards others were applied. I remember seeing in the island of Capri a whole pavement of a small octagonal church made of painted majolica; the scene represented Adam naming the animals, and extended over the whole surface. Most of these descriptions of tiles have been successfully copied in the present day, but our encaustic ones, as they are called, are very far from coming up to those discovered at Chertsey. A change in this respect is indeed much to be desired, and why we should go on laying down the same fleur-de-lys, the same quatrefoil, and the same rose, when we ought to have scenes and figures, is more than I can imagine. The Greek vases would afford excellent hints for the proper treatment, even were the teachings of the Chertsey tiles neglected.

It now remains to say a few words about porcelain, which is a semi-transparent pottery made of felspar and of a peculiar clay called kaolin. The name has also been a favourite bone of contention among antiquaries, perhaps the most rational solution being that of the Comte de Laborde in his *Emaux du Louvre*. He points out that the word porcelain occurs in old inventories long before the Portuguese brought the article now thus called to Europe at the beginning of the sixteenth century; that from the description this porcelain was most probably mother-of-pearl, and that when the ware was brought from Asia the word porcelain was applied to it, as the two substances resembled one another in a certain manner. However this may be, there is little doubt but that porcelain was imported into Arabia and Persia long before the discovery of the Cape of Good Hope by the Portuguese, and some have even gone so far as to recognise in it the murrhine cups of

the Romans, although the balance of evidence would almost point to coloured fluor spar as the material. The Chinese themselves place its invention about our Christian era, and have got complete accounts as to what colours were made at different times or under different dynasties[d]. If the forms of the Chinese vessels are occasionally open to criticism, and if we object to their utter disregard of probability and drawing in their monsters, we must at all events praise the beauty of the colour, which makes amends for all shortcomings, even for their stationary state of figure drawing. It would be almost endless to enumerate the various colours and tones of the rarer sort of china, the yellow and ruby being reserved for imperial use; a law, by the way, by no means more despotic than that of the old French *régime* which forbade the use of gold to any other manufactory than that of Sevres. The Japanese china is quite equal if not superior to the Chinese as regards colour, to say nothing of its incontestable merit in design. The egg-shell is particularly delicate. For some time Europe was content to import the porcelain, but at the beginning of the eighteenth century efforts were made to discover the kaolin, or at least a substitute. At last Böttcher having accidentally obtained it, produced in 1715 a perfect hard porcelain for Augustus II., Elector of Saxony, King of Poland, and more generally known as the opponent of Charles XII. This discovery was the origin of the Dresden school, which afterwards became so famous for its beautiful forms and beautiful paintings, and favourably distinguished in the former from the Sevres school, of which the colours were most exquisite, while the forms leave a very great deal to be desired. Soft porcelain had been produced in France as early as 1695, but the hard was not obtained until 1768. In the meanwhile the soft had become renowned for the extreme beauty of the colours, and even now, *bleu de roi, bleu turquoise, jonquille, vert pré,* and *rose du Barri* are almost household words. Mention should also be made of the English establishments at Bow, Chelsea, and Worcester, the latter of which is still at work and in a flourishing condition. This manufactory claims the invention of printing on porcelain, although it appears to have been used in the Henri II. ware.

[d] See Marryat, p. 181.

At the present day there are many large establishments for the manufacture of china, such as those of Messrs. Copeland, Minton, and Rose, of Colebrook Dale; and our china as far as colours go very nearly approaches the Sevres, some of the turquoise blue of Mr. Rose being particularly fine. Of course it is hardly to be expected that china should ever be very cheap, more especially that decorated with colours, such as the *rose du Barri*, but the present age has produced some things which are both cheap and beautiful, and among them there are the French coloured biscuit statues.

It is now acknowledged that the ancients when they had a beautiful marble or alabaster statue, generally endeavoured to heighten the effect by means of strong colour applied in thin lines, and diapers over the garments, while the hair was gilt, and the flesh covered with an encaustic varnish, the greatest care being taken to keep all the details most delicate in the execution. These coloured biscuit statues appear to me to come the nearest to the antique work as regards the polychromy, the only objection being that the carnations have hardly sufficient transparency. One good point is that they are not covered with a glaze, which takes so much from the effects of the little figures made at Dresden and at Sevres; at the same time they are apt to get rather dirty in London, and require a glass case.

This, then, must conclude my notice on pottery, and, as I said before, I think we are so far advanced that there is little room left for any suggestion beyond that of procuring better forms for the cheaper articles. The curves of the old Greek vases are said to have been suggested by a study of the natural lines of leaves of various kinds, a far more probable case than the theory that they are the result of hard geometrical investigation. For although many a man has reduced a natural curve to its geometrical elements, I very much question whether any one ever set to work to design a vase by the help of conic sections alone.

As it is, with all drawbacks I only wish all our industrial arts were as far advanced artistically as our pottery.

BRASS AND IRON.

It is so very seldom that we hear of antiquaries being of accord on any subject, that their agreements may generally be described as agreements to differ. There is, however, one point on which they are nearly unanimous, and that is the fact that bronze implements were in use long before those of iron. Now copper being a metal far too soft for the general uses of life, is alloyed in various manners to obtain the requisite degree of hardness, and to lessen the expense: this is done in various ways; but two are in greater use than the others. Thus, if tin be added to copper, the result is called bronze; if zinc, we obtain brass. The ancients employed for the most part the former alloy for the common objects of every-day life; we, on the contrary, make a much greater use of the latter, although to a much less extent than the Romans did of bronze, our iron serving us instead.

It is almost impossible for us moderns to have any conception of the vast number of statues which decorated an antique town. Did a man fill with credit any city office, or had he obtained any privilege for his fellow citizens, immediately a statue was erected to him. In the present day we should present him with a piece of plate, say a tea-service, which would only be seen by his private friends. The ancients went on a better principle, what they gave their money for was seen by every one; and as statuaries were then quite as good as our modern sculptors, and as the costume was very much better, the result turned out very different from what we see done at present. In fact, almost the last insult you can offer a man in the nineteenth century is to erect his statue, and as one generally does not want to insult one's fellow-citizens, the statue is seldom executed before the death of the original. Statues, as before remarked, were erected exactly as we present pieces of plate, viz. on the smallest pretence[a]: hence the immense number. Many of these were in bronze, but comparatively few have

[a] See Apuleius, Metamorphoses, book iii., where the magistrates having made Lucius the victim of a practical joke, as amends vote him a bronze statue.

reached our times, owing to the value of the metal. A marble statue was only good to burn into lime, but many things could be made from a bronze one. Some, however, have been preserved; such is the statue of Marcus Aurelius in the Capitol at Rome; and the celebrated bronze wolf in the museum of the same place, and which if not a modern antique of Rienzi's time, has very great claims to be the identical statue mentioned by Cicero as struck by lightning. The figure of Victory, in the museum at Brescia, is another very beautiful specimen of antique art; while Herculaneum and Pompeii, more especially the former, have contributed numerous examples to the Museo Borbonico at Naples. Herculaneum appears to have been a much richer town than Pompeii, and, moreover, was covered with lava instead of cinders and scoriæ; hence the ancients were not enabled to remove the more valuable objects as they did at the latter town. If we read Pliny we find very numerous passages relating to bronze statues and their artists; but as few or none of these works are in actual existence, the enumeration would be of little use.

Perhaps the two most celebrated bronze statues mentioned by him are the Colossus of Rhodes, seventy cubits high, and which after standing fifty-six years was cast down by an earthquake, — our author observing that "few men can clasp the thumb in their arms, and its fingers are larger than most statues; where the limbs are broken asunder, vast caverns are seen yawning in the interior"[b]; — and the colossal statue of Minerva Promachus at Athens, made by Phidias from a tenth of the spoils of Marathon. It must have formed a most prominent feature of the Acropolis, as seen by the spectator when facing the Propylæa.

In our cloudy climate, and with our parsimonious ideas of architectural decoration, we can have no idea of what this view must have been. Architecture in marble, painting, sculpture in marble and sculpture in bronze, were all united on a high rock rising from a plain; and when seen in the bright sunlight, and backed by a blue sky, it must have more than rivalled any assemblage of buildings in mediæval Europe.

To return to our bronze. This metal was not employed solely for statues, as is our custom, but formed the material of number-

[b] Pliny, Hist. Nat., xxxiv. 18.

less objects of common use, as excavations in most Roman settlements generally prove. Again, it was also frequently used as an architectural decoration, or as an adjunct to sculpture; witness the holes in many parts of the Elgin marbles. Bronze doors to temples were also very common, several ancient ones doing duty in the churches of modern Rome. Whole walls were covered with plates of brass, like the treasury of Atreus at Argos, in which some of the nails still remain. Again, the roof of the Pantheon was tiled with bronze, until it pleased one of the popes to convert the metal into the hideous baldachino which covers the high altar at St. Peter's. But the practice of melting down works in bronze was by no means a modern one, for if anciently every opportunity was seized upon to erect a statue, on the other hand, nothing is more common than to read of the said statues being broken up on the assassination of an unpopular prince, or on the disgrace of some too eminent a citizen. Thus the satirist moralizes on the conversion of the bronze statues of Sejanus into frying-pans and other ignoble vessels.

It must not be imagined that these statues were all of the brown tint we give our modern bronzes by means of acids and pickles; on the contrary, the ancients appear to have had a great liking for decorating both their statues in marble and their statues in bronze; and from what we read in various authors, and from what we see in various museums, we can form a very fair idea of the decoration of metal statues. In the first place, there is great reason to believe that the bronze was often left in its natural colour, and simply protected from oxydation by a varnish of some kind, perhaps encaustic. Again, most antique bronze statues I have seen are cast in several pieces, and fixed together by rivets or other means; and by using different alloys, and allowing the metal to oxydize in different manners, it is easy to see how a very great variety of effects could have been obtained. It is in this way that we may possibly explain a passage in Pliny, where he describes the bronze statue of a dying lady, which was so arranged that the life appeared to be gradually receding from the extremities of the limbs. Some writers have declared this to be impossible, but, as I said before, it might easily be accounted for by the employment of different alloys cast in small pieces, the junctions of the feet with the legs being hidden by anklets, of the hands with the arms

by bracelets, of the head and neck by a necklace. Another curious instance mentioned by the same author is that of a statue where the sculptor wished to represent the cheeks as suffused with blushes; to effect this, we are told that he mixed iron with the bronze, and the weather, oxydizing the former, produced a red tint. Perhaps by this we are to understand that a number of small needle points were driven into the bronze surface after the casting had been made.

The ancients were also fond of gilding their bronzes. The equestrian statue of Marcus Aurelius has been so decorated; and there is a Hercules in the Vatican similarly treated. This gilding was, however, not always considered an improvement, for Pliny states how a very celebrated statue was gilded by order of Nero, but the effect was so bad that the gold had to be scraped off again; and, adds the author, "Although the statue is covered with scratches from this operation, it is not the less admired[c]." We also learn a good deal of the various ways of decorating bronzes from the examples in the Museo Borbonico: there we find the curls and other accessories cast or wrought separately, and then fastened on; the eye-balls are made of silver, ivory, or composition; the pupils are supplied by darker compositions, and I have even seen eyelashes cut out of a thin strip of metal, and affixed in their places. I am not quite so certain about the lips, but the edges of them were so indented in several examples, that it was perfectly possible that a thin plate of copper might have been superposed.

As to the garments, they received delicate ornaments on their borders by means of incrustations of silver or copper. Niello also occurs occasionally, as in the celebrated bronze which forms part of the Townley collection in the British Museum. If we add to all these means of ornament partial gilding and the application of gold and silver ornaments, and perhaps even of the opaque jewels, we can easily conceive that a bronze statue is capable of being made a very different affair from what we are accustomed to behold.

Let us now see how bronzes were treated in the Middle Ages. In this case there is no lack either of documents or of the examples themselves; but first of all as to the way in which they were executed. This was by the process commonly

[c] Pliny, Hist. Nat., xxxiv. 19.

known as the *cire perdue*, because those parts to be cast in bronze were modelled in wax, which was afterwards melted out of the mould and replaced by the molten metal. In the present day a somewhat different way is adopted, a thin layer of clay replacing the wax, and as it of course cannot be melted out, the outer mould is made in separate pieces in order to effect its removal. The small bronzes, again, are, I believe, cast in sand much in the same manner as brass-work: those of M. Barbedienne are so carefully done that it is said they require but little touching up afterwards by the chaser. The Middle Ages have left us very many noble works in bronze, or latten, as most alloys of copper were then called. The word indeed appears to have been used in just as loose a manner as the Romans employed the term *æs*. As regards effigies in metal, perhaps no church can shew a more complete and beautiful series than our own Westminster Abbey; the earliest being those representing Henry III. and Queen Eleanor; and both remarkable as being ideal portraits. Unfortunately most of the *chefs-d'œuvre* of the Middle Ages were executed in stone or soft alabaster, and have suffered accordingly; and we have therefore to congratulate ourselves on the fact that the effigies under consideration were cast in bronze, and not chiselled in stone. The artist was one William Torel, whom there is every reason to believe was an Englishman, and not an Italian as some authors have supposed. From the original accounts, edited by the late Hudson Turner, we learn that he was a goldsmith; that he worked in the King's palace; that a large quantity of wax was employed, evidently for the *cire perdue* process; and, finally, that the casting took place in the adjoining churchyard. Nothing can be more beautiful than these two statues, which by the way are very large castings, only a few accessories being added afterwards, and we shall have to go back to the best period of Greek art before we find anything to put into comparison with them. The next in the series is the effigy of Edward III.: here the work, although the face is apparently a cast from life, is much coarser, the hair being very badly done indeed; but we know nothing of the artist. Then follow the figures of Richard II. and his Queen: these are more carefully treated and altogether better done, although being cast in several detached pieces, they have become grievously mutilated. The artists in this instance are described as copper-

smiths, and mention is made of a pattern, so that it is somewhat doubtful whether they modelled the figures or only cast them. The last of the Westminster series are the effigies of Margaret Countess of Richmond, of Henry VII. and of his Queen, but they belong more properly to the Italian renaissance than to mediæval art. They are, however, surpassingly well done, although the draperies are not so elegantly disposed as in Torel's work. The little figures of saints at the sides of the royal tombs deserve particular attention, both for the care displayed in their execution and the spirit of the design. At Amiens are two excellent bronze effigies of bishops of the thirteenth century, and no one who has once seen them can forget either the tomb of Mary of Burgundy at Bruges, glittering with gilding and enamel, or that of Maximilian at Innspruck, placed in the midst of the statues of his ancestors.

The bronze doors of cathedrals were also favourite subjects for the skill of the artists of the Middle Ages. Some were covered with figures in damascening, as at Salerno, and others with subjects from sacred history, as at Pisa, Monreale, and Verona; but the most celebrated are those at Florence known as the Gates of Paradise, for so they were called by Michael Angelo. At the beginning of the fifteenth century the good citizens of Florence determined on erecting a new bronze door to the Baptistery of St. John, as a thank-offering for the cessation of the plague. There was a competition, and, for a wonder, the successful man was actually the most competent. This man was Lorenzo Ghiberti, who eventually executed two doors. The first, to my mind, is far the best, especially in an architectural point of view; the latter one having subjects with landscape backgrounds, whereas the first is treated in a much simpler manner, so as to match with another door executed some time before by Andrea Pisano. I should not forget to mention that Lorenzo obtained his success partly by his careful chasing, which his profession of a goldsmith had enabled him to acquire[d].

Among the other legacies of the Middle Ages we must not forget the Albero at Milan, an immense paschal candlestick, with the signs of the zodiac and the battle of the Virtues and the Vices represented on the foot. Antiquaries have hotly dis-

[d] The trial-piece of Ghiberti is preserved in the Uffizii at Florence.

puted whether this is to be considered a work of the thirteenth century or a restoration by a renaissance artist. As far as I have been enabled to judge, I should certainly assign it to the thirteenth century, as the work and design are both first-rate. The shrine of St. Sebald at Nuremburg is another wonderful example of chasing and casting, although the details are all renaissance. The story goes that Peter Vischer and his sons, who were the artists, spent so much time about it that the sum stipulated in their contract could not near pay them. When the work was completed they went from door to door, and thus got paid by the voluntary contributions of their fellow-citizens. The curious thing about the matter is that the design in the first instance was a pure Gothic one, which has been published by Heideloff; it was afterwards changed, either from motives of economy or to accord more with the fashionable architecture from Italy, but even then the chief lines appear to have been copied from the tomb of one of the popes at Avignon.

The good towns of Nuremburg and Augsburg were indeed famous for all sorts of works in bronze. Witness the fountains which decorate the latter, and the beautiful medallions which lie so thickly on the tombstones of the cemetery, of the former city.

Were I to attempt to enumerate the various uses to which the different alloys of copper, whether bronze or brass, were applied in the Middle Ages, I am afraid I should never finish; for it is almost impossible to enter any church in Belgium or Germany without meeting with something new. In our own country we have the marvellous screens at Westminster, to say nothing of our magnificent series of monumental brasses. In France, unfortunately, it is different. At the end of the last century the country was declared to be in danger, and indeed really was in danger. Accordingly the lead was stripped from off the roofs to make bullets, and the bells, screens, tombs, and shrines all went into the melting-pot, to re-appear in the shapes of sous and cannon. One example out of many will give an idea of what we have lost. In the city of Troyes there stood a cross of brass, twenty feet high, the work of the fifteenth century, and most wonderfully decorated with architecture and figures. A rude drawing is all that we have to tell us what has disappeared.

The mediæval artists, as a general rule, gilded their more costly bronzes, and, further, engraved patterns on the dresses; those on the effigies of Richard II. being done with dotted work. Enamelling was occasionally used, as at Warwick and at Bruges, and in several of the monumental brasses. Various holes in Torel's statues would also point to the employment of jewels, either real or false.

The Eastern nations have always been famed for their works in bronze, and the objects shewn in the Japanese department of the Great Exhibition proved that the art is by no means a dead one at the present day. Some of the castings were very curious, especially the baskets, which must have been burnt out of the moulds before the metal could be poured in. Many also appear to have been executed by the *cire perdue* process. But the most curious thing is the partial gilding with which so many are decorated: thus we generally colour the whole surface of a bronze, and then rub off the colour on the more exposed surface, to shew the metal; the Japanese, on the contrary, slightly gild these same exposed surfaces, thus giving the idea that the metal is gold which has been partially oxydized to prevent its being too glaring to the eyes.

In the present day the numberless small bronzes which decorate our houses are produced in Paris, which city, somehow or other, has obtained a speciality for this branch of the arts. The manufacturer most in repute is M. Barbedienne, whose productions may be divided into two classes, viz. reductions from the antique, and designs by modern artists. Of these, the latter are infinitely more interesting than the former, for the ancients, it is well known, treated the drapery and details of a bronze statue in a very different manner to that of a marble one; thus everything is made sharper and finer in bronze than in marble, because one is a dark substance and the other a light. These differences do not, of course, shew so much in a reduction, but still one has always an uncomfortable feeling that the original is in a different material, and that the object would look better in marble, just as we have the converse feeling in the case of the Apollo, which most antiquaries believe to be a marble copy of a bronze original.

M. Barbedienne's works are remarkable for their very careful casting, but those accustomed to the more beautiful Greek bronzes, such as the shoulder-plates in the Museum, would cer-

tainly like to see more of that peculiar finish which can only be got by the use of the chasing tool. Among the French artists Barye is distinguished for his animals. Some of these are not touched by the chasing tool, but then they are modelled in a far rougher and more effective manner than the reductions from the antique we have just been considering, the roughness and asperities giving great life to the surface, and the whole bears to the finished Greek bronze the same relation that a rough sketch does to a finished painting. Mene is famed for birds and animals, especially dogs; and Clesenger has produced some most successful heads, e. g. that of Charlotte Corday, although as much can hardly be said for his restoration of the group of the Fates from the Elgin marbles. Pzadier, who, like our own Flaxman, thought like a Greek, might perhaps have attempted the task under better auspices, but alas! he too is gone.

It will probably be asked why we do not make small bronzes in England. I also have asked the same question. The reply was, that there exists no sufficient reason beyond the very sufficient one that it does not pay. Messrs. Elkington have attempted it, but I believe with the above result, and accordingly turn their attention more to electrotypes. As to our public statues, the less said about them the better. Because they are ugly and black, people cry out against the use of bronze; but the fault is in the artists and those who are called, or rather miscalled, the competent judges, and not in the material. If our climate is bad let the statues be covered with a coating of encaustic, which can be removed and renewed every year, thus giving an opportunity for the surface to be cleaned. Those who have seen the great fountains in bronze at Augsburg, and at Paris, can have an idea of what can be done in bronze, and what an artist can make of a fountain, while the specimens in Trafalgar-square are most efficient examples of how not to do it. Is it too much to hope that some day the Government, or a *really* London Corporation, may pluck up heart to erect some really large bronze work in the shape of a fountain on the finest site in Europe, and that the present affairs may be applied to their legitimate use, viz. to mend the roads?

Before leaving the subject of copper and its alloys a short notice should be taken of what is called Dinanderie, from Dinan, which was formerly a great centre for the fabrication of this sort

of work. Dinanderie may be said to be the art of making metal pots, and pans, and candlesticks, but, unfortunately, the mediæval development of it by no means came up to the contemporary arts. Its best phase was in the East in the thirteenth century, when Mossul became so famous for vessels of bronze inlaid with gold and silver. The vase of Vincennes, now preserved in the Louvre, is said to have been brought over to France by St. Louis, and is a most excellent example of the work; other specimens in our own country will be found in the collections of Messrs. Octavius Morgan and Rhode Hawkins, and in the British Museum. The ornaments for the most part consist of Arabic texts, with foliage interspersed, although we do occasionally find figures. As to the vessels themselves, they appear to have been made for domestic use, a Mahometan writer telling us that they were manufactured for the tables of princes.

I am not aware that this beautiful sort of work has ever been revived in modern days, and if it ever is I hope we shall confine ourselves to the manipulation, and not go copying Arabic inscriptions and ornaments because we see them on the originals. As to the mediæval Dinanderie, it has been revived principally by the care of the late Mr. Pugin, and Messrs. Hardman and Hart, to say nothing of many others, now turn out any quantity of it. The consequence is that candlesticks and gas-burners can now be obtained at very moderate prices, although the eye is still shocked by the very bright hues of the coloured composition with which so many specimens are decorated. What we really want is some good cheap original designs for candlesticks, &c., in cast bronze, which is far more lasting, and affords far more scope for art, than Dinanderie; and even in the latter we might reasonably ask for fewer leaves in the engraving and more figures, the latter for the most part being very conspicuous by their absence.

I am afraid that the subject of bronze has occupied so much time that little remains to be said about iron, and yet that metal plays by far the most important part in the present century. We are indeed the real age of iron.

We know very little of the employment of iron by the ancients, and even if we did, it would not be of much use for our purpose, inasmuch as most of the examples must have perished by oxydation. Luckily for us, they preferred to use bronze,

and thus we have a number of things which, had they been made in iron, would inevitably have disappeared.

In the Middle Ages the case was different. Iron was cheaper than brass, and the smiths of the time have left us noble works in the screen at Westminster and the doors at Merton College, Oxford, and St. George's Chapel, Windsor, and, above all, Notre Dame at Paris. These are all executed in short lengths of wrought iron, stamped while hot by iron dies, and then joined together, the said joint being hidden by a leaf: a very different way of going to work from some screens I have seen, where pieces of thin iron plate are not riveted, but screwed on to the main stem, and worked up with a pair of pliers. Indeed, this employment of screws is one of the worst features of the modern revival: for how can a brass screen be expected to last for centuries when it is at the mercy of the first dishonest person who has got his opportunity and a screw-driver? In old work the case is different; for there the thief has to deal with rivets, and detaching any portion entailed a long time, and consequently a chance of detection.

In the latter centuries of the Middle Ages the smiths began to get their effects by putting thin perforated plates of iron one behind another, and this was the beginning of the decline. There was less art and more finger-work in the shape of tracery, &c. Messrs. Hardman had an excellent example of this sort of execution in the Great Exhibition of last year.

The old smith frequently tinned his iron when in small articles for domestic use, or, if it were large, it was painted and gilt: thus the railings of Queen Philippa's tomb were coloured red. In finer works, such as armour, engraving and gilding were employed to heighten the effect, and in later times damascening. Now in the present day we have, it is true, given up armour, but we have new, and, to our ancestors, undreamt-of developments of iron.

In the first place, we have learned to cast iron. The earliest specimens of this industry are, I believe, the stove backs which were manufactured in Sussex at the end of the seventeenth century[e]. They generally exhibit figures in relief, ornaments, &c.,

[e] At Burwash, in Sussex, is a cast-iron monumental slab, with a cross and inscription in relief. Mr. Boutell, in his Christian Monuments, p. 105, gives a woodcut of it, and considers the date as being the latter part of the fourteenth century. One would much like to know something more about it.

and, in fact, are treated as if they were to be executed in bronze; they were castings, and if indeed iron would not rust, there would be no reason why the very highest works should not be made in that metal. How far the question of rust will affect the various iron structures, both wrought and cast, which have been erected during the present century, is a very open question. Hitherto they have been kept well painted, and oxydation thus prevented. But suppose for one moment that, owing to some national calamity, this precaution should be discontinued for some considerable time, and that the oxydation had well set in; how long would a structure last, say a bridge for instance, where so much depends on the rivets if of wrought iron, or on the screws if of cast. Again, in the cast-iron bridges, why should not the void spaces be filled in with raised work, representing men, animals, or foliage, instead of the inevitable circle or St. Andrew's cross. Such subjects, if the grounds were perforated and the figures painted and gilt, could hardly fail to be improvements. A beginning has been made in Hungerford Bridge, where the heads of the principal rivets have been gilt, and the iron-work coloured purple-brown instead of the inevitable black. This, it is true, is not a very great advance, and the bridge is not a very pleasing piece of architecture, but still engineering works are generally so ugly, that one is apt to be thankful even for small mercies.

Formerly the two professions of engineer and architect were not divided, and if we look into the old books of the sixteenth and seventeenth centuries we shall find that even machinery was to a certain degree made ornamental. Examples of this will be found in the old editions of Vitruvius. Hitherto we have done the reverse. The machines have been very strong and have done their work very well, but they have been dreadfully ugly, bearing about the same relation to what they ought to be as a skeleton does to the human body. One is very much tempted to imagine and try and think out how our ancestors of the twelfth and thirteenth centuries would have treated a royal locomotive with its tender and carriage—say one for William Rufus, or King John, or Henry III., all of whom were fond of magnificence: perhaps they would have converted the locomotive into the form of a dragon vomiting the smoke through his upraised head; his body and wings

being rich with gold, colour, tin, and brass, and perhaps even great crystal balls would do duty for eyes.

Again, how would they have treated a steam-boat? Would the funnel have been made into a sort of tower? would the sails have been painted with coat armour? would shields have been hung all round, and would the paddle-boxes have been historiated with subjects on a gold ground? These are questions that unfortunately can never be answered, even by the antiquary, who can only see things that have existed, not those which might possibly have been made; but of one thing we may be very sure, and that is this, viz., that had locomotives and steamboats been discovered in the twelfth or thirteenth century they would not have been the ugly things we see at the present day. The same truth also applies to our iron bridges and our iron buildings; whether there ever will be an improvement is very hard to say, but it is not so very difficult to predict that the said improvement is never likely to take place until we have an architecture, and coloured costume. Even our boasted science is occasionally at fault, and in our anxiety to make everything of our favourite metal we place it in the very situations where it is most unfitted. Thus tin does not suffer any appreciable oxydation, and it was thought by covering plates of iron with a thin coating of this metal that it might be used for covering roofs, and accordingly the whole of the Houses of Parliament were covered with it, but somehow or other it was forgotten that any accidental abrasion, say a chisel dropped on it, would expose the iron, that the said iron would rust, and that the rust would gradually increase and flake off the tin. But so it happened, and the consequence is that the roofs are now covered by a composition invented by M. Zerelmy.

Again, it has somehow been discovered that cast-iron girders are not quite the capital things they were supposed to be; firemen declaring that they rather preferred wooden ones, which took some time in burning, whereas the hot cast-iron was apt to snap on the application of water, and transform itself from a girder into two heavy levers acting on the walls, and occasionally bringing them down; also, that if the girders were proved to a certain pressure, it by no means followed that they would take even half of that pressure on a second application: we have therefore heard much less of these articles of late years.

At the same time it appears to me that cast-iron might be advantageously employed in the arts. If placed indoors, and kept in a dry place and varnished, oxydation would be little to be feared, and statues of it might be gilt or engraved with acid, or even damascened, while the ground might be blackened, or, better still, kept its natural colour. Statues and other objects thus treated would make a pleasing variety to bronze.

GOLD AND SILVER.

With all its faults the present century can hardly be charged with ingratitude to its benefactors, or at least to those it considers to come under that title. In truth, the fault if any is quite the other way, for we can scarcely take up a newspaper without seeing that a testimonial has been presented to somebody or other. These testimonials take the most varied shapes, from gold medals which are utterly useless down to tea services which are just as much the reverse. More generally, however, the token of esteem will turn out to be a vase, or a candelabrum, or an epergne; but whatever form it may take, the design, and frequently the execution, but too often leaves a very great deal to be desired. To any one acquainted with what was done in the Middle Ages and in the Renaissance there is really no sight more saddening than the interior of a silversmith's window; what little art is there to be found is generally of the latest and most debased *rococo*, with occasionally a *soi-disant* mediæval chalice with proportions and engraving such as no mediæval chalice ever had. If, on the contrary, we look over any collection of old plate, however late, say such as we see in Mr. Lambert's shop, we are at once struck with the amount of hand-work displayed; and if we go further and handle it, we are surprised at its exceeding lightness — it was hardly made to be sold at so much an ounce.

At the same time thus much must be said in favour of the modern silversmiths, viz. that the fault does not rest entirely with them; they only buy or cause to be manufactured things which they think will command a quick sale, and a great part of the blame must be attributed to their customers, who have the bad taste and want of education which leads them to buy such objects. A more general spread of art education will, it is hoped, remedy this evil: in the meantime it may be as well to examine what was the state of things with regard to the silversmith's craft in the Middle Ages. I say the Middle Ages, because we possess a great mass of evidence, both documentary and real, of what was then done, which unfortunately is not the

case with regard to the classic era; for although a considerable amount of documentary evidence might be obtained by an industrious rummaging of the old authors, still the value of the metal has so completely caused the destruction of the articles themselves that there would be very little to point to in the way of illustration. We even learn very little from Pliny (who is usually so full of details of all the arts), beyond certain facts of the poverty of the early Romans in respect to plate, of the gradual increase of the precious metals after the victories of Paulus Æmilius, and of the extravagances of later times; the most notable being the instance of Drusillanus, the slave of Claudius, who possessed a silver charger weighing 500 pounds, for the manufacture of which a workshop had to be expressly built: this charger being accompanied by eight other dishes each 250 pounds in weight. Our author finishes by sarcastically wanting to know how many of his fellow slaves would it have taken to introduce these chargers, and whether giants were the guests for whom such large dishes were wanted. The most interesting information we obtain from the "Natural History" is in chapters liii. and lv. of the 33rd Book. The former tells us of the enormous sums given for silver plate, and the latter mentions the names of the most celebrated artists. The Benvenuto Cellini of antiquity appears to have been one Mentor, whose works were so much esteemed that Lucius Crassus the orator paid 100,000 sesterces for two goblets chased by his hand. His most valued works, however, appear to have been dedicated in the temples, but in Pliny's time the conflagrations at Ephesus and in the Capitol had caused their destruction.

Other artists are also mentioned as well as the subjects on which they worked; these appear to have consisted of embossed figures of Sileni, Cupids, Centaurs and Bacchantes, hunting and battle scenes, the court of the Areopagus, and trial of Orestes, &c. Thus much for antiquity; but if we want to form a just idea of what plate really ought to be we must go to the Middle Ages and to the early Renaissance.

In those times, when there were no bankers, when usury was forbidden, and when the acquisition of land or houses was apt to bring the possessor into suspicion with the ruling powers if he belonged to the middle classes, or to form an inconvenient security for his good behaviour if his station of life were higher, it was often exceedingly desirable to pos-

sess property in the form of plate, which in peaceful times was useful and occasionally afforded a means of display, while, on the contrary, should disturbances arise, it could easily be hidden away or sent to the coiner, who made it into money. In those days it was also the custom to give and receive presents pretty much as it is at the present time in the East, and in the royal accounts will be found numberless instances of this custom. Froissart, the mediæval Herodotus, in his quaint gossipping manner always winds up his account of any embassy or visit of one distinguished person to another with the fact that rich presents in jewels or plate were given and received. It is obvious that all this must have made good trade for the goldsmiths, who were then artists working in their own shops and producing their own work, not tradesmen who buy things out of manufactories or have them made to order. Out of such goldsmiths' shops great artists used to proceed: thus Pliny tells us that Mentor made statues in bronze; William Torel, who executed the effigies of Queen Eleanor and Henry III., was a goldsmith; so was Francia the painter, and so was Benvenuto Cellini, who has become the representative man of the craft, although almost the only authentic works of his now remaining are in bronze. How is it that we never hear of goldsmiths turning artists in the present day? I do not mean that artists do not occasionally work for goldsmiths, for they do, as in the case of the late Mr. Cotterell, and of Mr. Armstead and Vechte. But somehow or other we never hear of men who keep a shop, as Francia and Cellini did, turning sculptors or painters; the fact being that Torel, Cellini, and Francia were both tradesmen and artists, whereas our present silversmiths are simply tradesmen whose utmost accomplishments are to know the value of precious stones and of good workmanship. As the precious metals were rarer in the Middle Ages than at the present day, it was by no means uncommon to execute vessels in copper or latten gilt; and from a passage in Sacchetti it is by no means improbable that their manufacture constituted a separate trade, as he speaks of an *orafo d'ottone*. At the present day this industry is represented by what is called *or-molu*, but a glance at any of the shops where fashionable nicknacks are sold will be sufficient to prove that the *orafo d'ottone* has taken leave of art quite as surely as his *confrère* who uses the more precious metals.

Before entering into a short description of the various arti-

cles required for ecclesiastical and secular use in the Middle Ages, it may be as well to take a glance at the various processes by which they were enriched. The simplest of these was engraving. Here the lines were not of varying thicknesses, but the same throughout; they also terminated in a blunt end, like the engraving on the monumental brasses. The lines were filled up either with a black composition somewhat like our heel-ball, or by enamelling, or by niello, an art almost lost at the present time; the platina vessels made in Russia being the best modern specimens of it. I need scarcely say how common was its use in Italy, or tell the well-known story how Maso Finiguerra discovered the art of taking impressions on paper while trying the effect of his niellos.

A great deal of engraving is done now-a-days, but it is almost inconceivable how difficult it is to get small figures engraved in good strong lines like the old work. The engravers do not want skill, but unfortunately they cannot draw the figure, and even the most skilful copyist must fail if he does not exactly know what he is about. Here, again, is a case for the schools of design. I must say, however, that I have never had to complain of the engraving done by Hardman and Co.; and why? simply because not only has the engraver been well trained, but one of the firm, Mr. J. Powell, is an excellent artist, and the work being submitted to his inspection, it is not allowed to go out if incorrect.

Bossing up.—This process is described by Theophilus and Cellini; the former would appear to refer to reliefs, but the latter directs his attention more particularly to statuettes. First of all the intended figure was modelled, then cast in bronze, and a thin plate of silver hammered over it, and when completed this silver was cut off in pieces, soldered together, filled with pitch, and afterwards finished with various tools, the pitch being finally melted out. Work of this description is exceedingly light, and some ten years ago in Rome I saw a crucifix by Caradosso, who is particularly mentioned by Cellini for his skill in bossing up, the weight of metal being almost inconceivably small for the size of the figure. The shrine of St. Romain at Rouen has some excellent statuettes done by this process, which is also employed in the great altar dossals and frontals at Florence, Pistoia, St. Ambrogio at Milan, St. Mark at Venice, and elsewhere.

CHASING FROM THE SOLID.—This was not a very usual process, as it required the greatest care and accuracy, but it was almost always more or less necessitated in the preparation of enamels, more especially those called the translucid on relief. The celebrated bell attributed to Cellini, formerly in the Strawberry-hill collection, is said to have been executed in this manner.

STAMPING.—Also described by Theophilus, who gives long directions about it, especially for the preparation of the stamping irons: from his account it would appear to have been principally used for the ornamenting of horse furniture and books, and even for pulpits. The shrine of St. Taurin at Evreux presents some charming specimens of it executed during the best period of Christian art.

PUNCHING is used for the grounds of engraving instead of cross-hatching. The ornaments on the garments of the effigies of Richard II. and his Queen have been done by punching with a point.

FILAGREE. — This art is still practised. In parts where modern civilization has hardly reached, and in the more remote villages of Europe, we still see elegant ornaments of filagree in far better taste than the modern French jewellery which is gradually supplanting them.

Filagree is of two kinds: in one flat ribbons of metal are soldered together, the upper edges being often ornamented. This filagree, which is generally applied on a ground, is to be seen in the celebrated Hamilton fibula in the British Museum. The Roach Smith fibula at the same place is an example of the other variety, which consists of little round wires soldered together in various patterns, with the addition of little metal balls, in fact, very like the modern Maltese work. In later times, *i.e.*, in the thirteenth century, this filagree took a new form, and little leaves are soldered to the ends of the wires, producing a most charming effect. This is the best development of the process; it occurs in the shrines of St. Taurin, St. Romain, and in many others; the founder's plate at New College, Oxford, also presents traces of it.

In early jewellery we often find a very curious kind of work, consisting of a number of little cells formed by means of gold ribbons, like in *cloissonné* enamels. These cells are filled up with pieces of garnet cut into thin slices, or even with thin red glass.

This is hardly the place to enter into the subject of en-

amelling which played so great a part in mediæval plate, but I can only remark that transparent enamels accord very much better with the precious metals than the opaque ones, and that the approved way of using both enamels and jewels in the early part of the Middle Ages was, as we are told by Theophilus, to set them alternately, often with filagree in the interstices.

Of course the gold and silver smiths frequently availed themselves of casting the smaller parts and finishing them up with the burin, but, as far as I have been able to ascertain, figures of any size were either bossed up or plated upon wood. The latter plan was seldom used, and is not very satisfactory; see the shrine of St. Taurin at Evreux.

Now let us see a few of the uses to which the Church applied the labours of the goldsmith. First of all there was the chalice, of which it was *de rigueur* that the bowl should be of silver, whatever the rest might be. It is for this reason in ancient examples that we so often see the bowl of a later date. The mediæval chalice can be deduced in clear gradation from the antique vase. Thus the little chalice found at Gourdon is nearly a copy in miniature of the celebrated vase at Naples. Then we get the chalice of Theophilus, where the gilded and nielloed bosses, like spoons, play so important a part — the handles having become a matter of indifference. Then we have the one at Augsburg, where we still see the spoons. In the Chichester example they occur only at the foot and end in trefoils; afterwards they disappear altogether, the only trace being in the cup into which the bowl drops. Still later we arrive at the fifteenth century chalice, where the knob is enormously large and the pipe enormously long.

The next most necessary vessel is the paten, which in the modern Roman communion is simply a round plate with no engraving on the upper surface, and which fits into the top of the chalice. Anciently the practice was different, and we find patens with engraving, enamels, and even with jewels, as that of St. Goslin in the cathedral of Nancy. The *burettes* for the wine and water, the cross or crucifix, for both were used, and the candlesticks, completed the absolute furniture of the altar. In early times the Holy Sacrament was enclosed in a vessel, often in the form of a dove, and suspended over the altar; it was shewn to the people in an *ostensoir*, which generally took the form of a little chapel on a foot and pipe like a chalice, or

else a round sun with rays similarly mounted; it was also kept in a *ciborium*, a little circular vase with a conical top, but in after times it changed into a globular vessel placed on the stem and foot of a chalice. Book-covers, alms-basins, sacring-bells, chrismatories, processional crosses, holy-water stoups, paxes, and portable altars were only a few of the articles demanded for the worship of the unreformed Church, and if the priest's cope required only a morse, there was hardly any end to the valuable adornments of the vestments of the higher clergy. Thus the bishop had his precious mitre, such as we see the remains of at Oxford; his crozier, such as is shewn at Winchester; his pastoral ring, his jewelled gloves, and jewelled orphreys to his chasuble, amice, stole, or cope. But the great ambition of the authorities of nearly every cathedral or large church was to possess a *feretrum*, or shrine, for the patron saint, to say nothing of numerous reliquaries, to describe the various forms of which would be to give a long description of a great portion of mediæval *orfévrerie*, for nearly every vessel could be turned into a reliquary.

As to the great shrine, it consisted of a basement of marble or coloured stone, upon which was placed a wooden structure covered with plates of gold and silver. In latter times this upper part assumed the form of a small church with buttresses, pinnacles, windows, statues, &c.; but in the early part of the Middle Ages it was simply an oblong structure with a coped top. Of course all the processes above described were employed in its decoration, and although a long time was necessarily employed in the construction, when finished these *feretra* must have been marvels of the art of the time, to say nothing of subsequent votive offerings which were placed around or otherwise attached. The whole of this precious work was covered with a wooden *cooperculum*, which was raised or let down by means of pulleys and counterpoises attached to the roof of the church: and although no one of these great shrines remains in its former position, the very excellent description of the shrine of St. Thomas à Becket by Erasmus enables us fully to realize the whole affair; such as the wooden chest which covered the golden one, and "being lifted up disclosed inestimable riches"—the jewels given by the French king, and the votive rings attached in bunches. Sometimes these shrines were comparatively small and could really be carried about, hence

the term 'feretory;' but the more important ones were certainly fixtures, and appear to have been nothing more than the covering of the body, which was placed in the upper part of the stone basement, as at Westminster.

A few, very few, of the treasures attached to mediæval churches have escaped the hand of the destroyer. But at Aix-la-Chapelle the traveller, by paying a small fee, can even at the present day see what Erasmus would call "inestimable riches." Still more curious is the *trésor* of the little church at Conques, in the middle of France: here the work is much earlier than that at Aix-la-Chapelle, being the work of Abbot Bego in the eleventh century. There is every reason to believe that he brought artists from a distance to work on the spot, much in the same manner as Suger describes the way he went to work at St. Denis. The revolution of 1789 dispersed the latter collection, but many of the objects are still to be seen at the Louvre and in the Cabinet de Médailles.

We now come to the Domestic Plate of the Middle Ages—a subject which has hitherto by no means received the attention it deserves, most people imagining that the church was the end-all and be-all of our ancestors, as the temples were of the ancient Greeks. Unfortunately, we know so little of the domestic life of the latter people, that it is difficult to bring forward proofs either way; but we do know sufficient to shew that our forefathers were just as fond of beautiful things in their domestic life as they were in their ecclesiastical life. The best insight into the real state of things will be found in the Glossary attached by M. de Laborde to his Catalogue of the enamels in the Louvre; which work, moreover, contains the inventory of the gold, silver, and jewels belonging to the Duke of Anjou, made somewhere about 1360, before his proceeding to England to take the place of his father King John, then the prisoner of Edward III.

In this inventory we find an immense amount of works in the precious metals described with great minuteness; so much so, that it would be perfectly easy for any one acquainted with ancient *orfévrerie* to make perfectly satisfactory reproductions of them. Thus we meet with, besides the chapel furniture, *gobelets, hanaps, pots d'argent,* cups, flagons, dishes and plates for meat, saltcellars, basins, *épreuves,* fountains, *nefs,* and ewers. The four last demand a word of explanation.

Everybody in the Middle Ages was haunted by a fear of being poisoned, and if any one died in a sudden manner his death was very often put down to that cause, more especially if he were a person of high rank. It was believed, however, that certain substances, such as serpents' tongues, unicorn's horn (walrus' tooth), &c., would change colour if brought into contact with poisoned food; and accordingly, the carver had not only to taste the food, but to try it by means of touching it with the piece of assay. The piece of assay was often highly ornamented, and kept in the great *nef* with the knife and fork and spoon of the proprietor; but occasionally it had a vessel to itself, and these are the *épreuves* mentioned in the inventory.

As to the *nef*, it was, as its name imports, generally in the form of a ship. It must have been a large piece of plate, for we read that immense sums were spent upon it, and that it was generally named like a real ship: thus one was called "the Tyger." The use of the fountain is a little more difficult to discover. As far as one can make out by a careful reading of the text, it appears to have been a vessel for containing water, that it had a tap or taps, and that it also generally possessed a goblet. The shape is also most fanciful: at one time it is a winged dragon on the top of a tree, at another a castle supported by figures; it had a stand, also of silver, the sides of which were generally enamelled with subjects, and the top, upon which the figures, or tree, or castle was placed, was enamelled green. From the occurrence of the tap and the goblet, we may surmise that it was placed on the table for the same purposes as we use water-jugs and glass goblets at the present day at our desserts.

The number of ewers in the collection was also very large: they generally occur in connection with a cup, and in all probability were used as much for wine as for water. They were made of the most extraordinary shapes, and enriched with a good deal of enamel, and sometimes precious stones. Their descendants may be seen in the little owls which perform the office of pepper-boxes, and which are even now to be seen in most of the goldsmiths' shops. The following will give some idea of what these ewers were like:—

"78. A lady, half of whose body is that of a woman, the other half that of a savage beast with two legs; upon a terrace enamelled with blue, with little trees, and stags and greyhounds, and mouldings below; and from the

lap of the said lady issues a head of an ox, of which she holds the horns in her hands, and in the said head is a spout, and from the ears of the aforesaid head, and from the sides of the said lady, and from the ends of her dress, hang by chains the scutcheons of the arms of the Archbishop of Rouen and Marigny. And the said lady is clothed with a little mantle slit at the sides, and has a long hat on her head, enamelled, the hat and dress being the same colour. And behind the said lady, on the back of the beast, is a place for a goblet made in tracery work, and the goblet is of crystal with a foot of silver enamelled with moulding and traceries, and about the crystal are four bats; and the cover is of crystal edged with silver, with mouldings and traceries; and the knob is made of vine-leaves, and from it comes a button of three sides enamelled with silver and green."

One great peculiarity of our ancestors was their fondness for precious materials, such as crystal, agate, onyx; and many was the antique vessel of these stones and many the antique intaglio and cameo which was worked up in connection with new forms by the mediæval goldsmith. Indeed, so strong was the fashion, that we find costly mountings lavished upon things of but little intrinsic value, such as ostrich-eggs, which generally turn up in inventories as *œuf de griffon*,—such as glass vessels from the East, known as *verre de Damas*, probably of the same sort of manufacture as Mr. Slade's glass lamp, or the well-known Luck of Edenhall, which I am assured, Mr. Longfellow notwithstanding, is not broken. China vessels were also occasionally used, and only the other day I met in Hewett's shop, in Fenchurch-street, a piece of ware of the identical manufacture as that which figures among the founder's plate at New College, Oxford.

The artists of the Renaissance were just as fond of rare materials as their predecessors; and probably the most beautiful piece of jewellery in the world is the onyx vase belonging to Mr. Hope, the mounting of which is one mass of jewels, enamels, and figures. The traditions of the Middle Ages were also kept up in Germany to a late period, and the vessels manufactured in such large quantities in Augsburg and Nuremburg were executed by the same processes as those of the Duke of Anjou, the only difference being that enamelling was gradually disused. Of late years our plate has got worse and worse in design and execution—so much so, that work of the last century is eagerly bought up whenever attainable. The reason is not that good work cannot be done; on the contrary, the best of work can be obtained if a price is only paid for it. I am not speaking of artists like Vechte and Armstead, but

simply of good workmen, who are certainly to be found, but in small numbers. What, however, shall we say to the ordinary man who has done nothing all his life but chase and model Louis XV. scrolls, or engrave rococo foliage? I once gave an ordinary piece of engraving to one of these workmen to execute, and the result was perfectly ludicrous. The late Mr. Pugin and the Ecclesiological Society set themselves to work some fifteen years ago to introduce the old way of working, which to say the truth had hardly ever been abandoned in the best articles. Unfortunately, in plate as in architecture, the later part of the Middle Ages was copied instead of the earlier, and we have still to deplore the absence of a really artistic feeling for the better and earlier work. Hardman, Hart, Skidmore, &c. execute certain things capitally—in fact, quite as well as the old; but it is exceedingly difficult to get a figure well bossed up or a piece of engraving well done, even if a drawing be given, while great inattention is paid to the setting of stones. I have had articles sent me where hardly a single stone was set truly; and on another occasion the work came home with two stones broken, and one turned upside down, while a crystal foiled underneath had been substituted for the fourth.

Our enamels are also open to great improvement, the colours being far too bright and glaring: put any of them by the side of Chinese work, or even by the productions of M. Barbedienne, and the result is most disheartening. I am afraid the schoolmaster—I mean the master in the school of design—is sadly wanted among the workmen employed by the modern silversmith; who on his part would not be the worse if he were to attend the schools himself in his younger days, and thus become a little more of an artist without ceasing to be the tradesman. We all remember the beautiful works of Morel in the Exhibition of 1851; why should they not be substituted for the Mazeppas, Richard Cœur-de-Lions, and Charles the Firsts, which but too often are only bronze subjects cast in silver.

It now remains to say a few words on jewellery. If of late years our plate has been bad and tasteless, how much worse has been our jewellery. Until the late revival of Etruscan work it was positively dangerous to one's artistic feelings to look in at a jeweller's window. The revival of the Etruscan work, as everybody knows, is due to the energy of Signor Castellani, who by dint of time and industry succeeded in gradually re-

viving nearly all the ancient processes. During the present century, and part of the last, the sepulchres in the southern half of Italy and the Greek islands have undergone a systematic search for the various antiquities contained in them. The most valuable of them are the painted vases and the jewellery. The jewellery is totally unlike anything of the present day, depending for its beauty not on precious stones, but on the fineness and skill with which the metal itself is worked up. Some of the articles are so slight that they must evidently have been used only for funeral purposes, but even that designed for everyday wear is so light that it exhibits the greatest possible contrast from that of our own day, when, as a jeweller once observed to me, people will have a lot of gold for their money. If we look carefully at the Etruscan work, and it is often so finely executed that it requires the aid of the microscope, we shall find the following processes:—1. It is beaten up sometimes by hand, sometimes by a die; it is pierced; a thick wire was cast or worked into an ornamental pattern; two small wires are worked into a cable; a thin sheet of gold is cut into strips, and applied in various patterns edgewise, on a surface of metal; or the article is entirely made up of it, like our filagree; thin wire is twisted round in coils and soldered to a plain surface; wires are also placed in juxtaposition on a chalk or earthen core, and then soldered together, the core being afterwards removed; small flat chains are soldered together at their edges; and lastly, the Etruscans had the art of producing what we call frosting, by soldering most minute grains of gold, like dust, on to a gold surface, the difference being that our frosting, which is done by hand, soon becomes tarnished, while that under consideration remains always the same. Unfortunately, it is a process that we moderns have not as yet succeeded in imitating, and although Signor Castellani asserts in his pamphlet of last year that he has lately succeeded, I do not remember seeing any specimens of it in his stall at the Great Exhibition. At the same time great credit must be given to him, if not quite as the originator of the movement, at least for having mastered the details and brought the revival almost to perfection.

The finer jewels of the Middle Ages were constructed on a different principle. Very few have come down to us, but when we look at the representations of them in the pictures, and,

above all, the MSS., we easily find the reason. They appear to have consisted almost entirely of precious stones, set with the smallest possible quantity of metal, and so fragile that one is apt to wonder how they could possibly have lasted any time at all. Of course they were not all of this description, which belongs principally to the fifteenth century. On the contrary, the Anglo-Saxon jewellery, such as the Hamilton fibula, the Roach Smith fibula, and the Alfred jewels, although displaying great delicacy of workmanship, are so arranged that they could be worn without much actual damage.

So, too, with the jewellery of the Renaissance, where enamelled objects in relief play a most important part. At that time every gentleman wore a piece of jewellery in his hat, called an ensign, and every lady a brooch; the consequence was that a high order of art was in demand, and people vied with each other in employing the best goldsmiths. Any one who reads Cellini's Life, or the Lives of the Painters by Vasari, cannot fail to be struck with the great demand for first-rate jewellery; but then, as I said before, the jeweller made his own designs and worked at them with his own hands; and to do this he was not only apprenticed, but taught to draw: and Cellini describes how he obtained his first commission by the admiration of his drawing by a lady, who finally entrusted him with the resetting of a set of diamonds, which he effected in the form of a fleur-de-lys, filling up the spaces between the stones with little figures, foliage, masks, and other devices. In the British Museum will be found a sketch-book of Holbein, containing a great many designs for jewellery; these have been successfully copied by Messrs. Hancock, Widdowson and Veale, and other jewellers, and are among the most satisfactory specimens of modern work. The French imitations of the cinquecento jewellery are wonderfully executed, more especially the enamels on relief. As to the Etruscan work after Castellani, perhaps the best specimens are those of Mr. Green; but we are sadly apt to make it too heavy. Jewellery is far more important an affair than it appears at first sight, for either the real thing or its imitation is used by most people. The trade in the imitation assumes large proportions in France and Birmingham, and I really do not think the patterns produced in it are at all worse than those we see in the windows of fashionable jewellers, but rather better.

The last part of the present subject is that of the coinage. Now no one is obliged to buy plate and jewellery, in fact, there are very many of us who never can expect to do so; but everybody, even the poorest, has coins passing through his hands, and it consequently becomes a very serious consideration that these coins should display such art as shall render them agreeable objects and be the means of fostering good taste and a love of the fine arts; in fact, they are examples of art applied to industry in its fullest sense.

Like all other arts, that of making dies for the coinage has had its phases of good and bad. For the good, we must go to our old masters, the Greeks. The curious parallelism between the progress of Greek art and that of the Middle Ages is now well known: thus we have the pre-Phidian work and that of the twelfth and beginning of the thirteenth century, as at Chartres; then we have the perfect work of Phidias and the porches of Notre Dame at Rheims, and the works of Torel at Westminster; and, lastly, come Praxiteles, Lysippus, and the late fourteenth century. The Greek coinage displays all these phases. The early coins are coarse heads, but are very energetic—see the coins of Athens; then they become gradually modified; and there is one of Athens which is almost perfect, having all the serenity of the first period with all the beauty of the second. The Attic coinage never got further than this, and, indeed, shortly afterwards went back to rude imitations of the earlier types. But if we wish to see the perfection of what the Greeks could do we must go to the coins of Syracuse: such as the great head, said to be Arethusa; that of Philistis, a most mediæval composition; and, above all, to the lovely head on the coins of Panormus. Now the difference between these and the heads on other Greek coins, and indeed the classic female head generally, is this: if both could be turned into actual life, the lady with the regulation classic features, although beautiful, would not have much to say for herself, and one would finish, as one generally does finish with such people, viz. by getting heartily tired of her; but if the features of the Panormus coin could be called into life, we should find them to belong not only to a beautiful woman, but to what is even better, viz. one gifted with *esprit*.

The Greek portrait coins are also very fine; witness that of Alexander on the coins of Lysimachus, and those of the kings

of Pergamus. The Roman coinage, although presenting good portraits, and to a certain degree good art, is very far behind that of the Greeks in the higher qualities. The great inconvenience of the Greek money was the excessive relief of the subjects, which prevented its being arranged in piles, and which caused a great deal of wear in the most prominent parts. In the coinage of the Middle Ages this was remedied, and there are some beautiful works of the fourteenth century which leave very little to be desired; they are well designed, and well executed, and perfectly adapted for piling. As to the Italian series, it is almost impossible to speak too highly of it: witness the Milan coinage of Louis XII., said to have been designed by no less a person than Leonardo da Vinci; see also the coins and medals executed by Cellini, to say nothing of our own countryman, Simon.

Now in the present day our coinage is so very bad as regards art that probably the less said about it the better: I allude more particularly to the design. The old five-shilling piece was a noble coin, for the St. George and Dragon, although most ludicrously classical, was still well executed and well composed: so was the sovereign, with a similar subject. The last Republican coinage of France was also excellently composed as regards the head; though why all our medallists should run mad after a wreath, with the designation of the coin within it, is more than I can imagine. It is certainly a most unnecessary piece of knowledge, for almost the first thing a child learns is the value of money. In the thirteenth and fourteenth centuries in England, the name of the moneyer and that of the town in which he lived formed the reverse; but still, by means of beautiful letters, and by intersecting the two concentric inscriptions by a cross, a very capital composition was obtained. With regard to our coinage it is clear that we cannot go to the Greeks, as their raised figures will not suit modern requirements (they must be reserved for medals); we should therefore take our lesson from the purest French and Italian types of the fourteenth and fifteenth centuries, and doubtless, in the hands of a man of genius, the rose of England could be made as beautiful a reverse as the *giglio* of Florence.

FURNITURE.

It will be observed in the course of these lectures, no matter what the subject, that we have been again and again obliged to refer our most notable deficiencies to the want of a distinctive architecture and to a coloured costume. We now come to a third evil, namely, our very unsatisfactory, not to say ugly, furniture. It may be objected that it does not much matter what may be the exact curve of the legs of the chair a man sits upon, or of the table off which he eats his dinner, provided the said articles of furniture answer their respective uses; but, unfortunately, what we see continually before our eyes is likely, indeed is quite sure, to exercise a very great influence upon our taste, and therefore the question of beautiful *versus* ugly furniture does become a matter of very great importance. I might easily enlarge upon the enormities, inconveniences, and extravagances of our modern upholsterers, but that has been so fully done in a recent number of the "Cornhill Magazine[a]" that I may well dispense with the task. The writer points out the artistic perils of a young couple about to marry, and how in choosing their furniture they are usually so bewildered that they often make their selection depend on the shopman's assurance that "they sell a great many of that article." This part of the subject I may, therefore, leave in the hands of the writer in the "Cornhill," whose only fault is, that he has not been able to sign his work, and thus add greater weight to his teaching.

If we consult antiquity, by means of sculptures and extracts from authors, we may get a very fair idea of what were the forms of the furniture among the Egyptians, Greeks, Assyrians, and Romans, but their civilization was very different to our own; and we may learn very nearly all we want to learn if we go to the Middle Ages, of whose furniture we possess the actual specimens, besides the sculptured and written authorities. It is almost needless to point out the prevalence of rich materials in the composition of the more important pieces of furniture in ancient times, such as the ivory throne found at Nineveh, of

[a] "Cornhill Magazine," March, 1864.

which we have portions in the British Museum, or the notices of the rich furniture in Herodotus, or the couches and tables inlaid with silver, gold, and tortoise-shell described by Pliny, Apuleius, and other classics. In the Cabinet de Medailles at Paris is part of the wooden leg of an ancient chair covered with a thin plating of silver; and if we may believe the MSS. of the dark ages, as they are called, this process appears to have been a very favourite one: thus Charlemagne is said to have possessed sundry tables covered with the precious metals, having plans of cities engraved on them. It has been suggested, with great probability, by one author, that these tables were probably small table-tops, which were placed on a low stool in the middle of the room, as in the East at the present day, the guests sitting round them on cushions or on low divans. As to the plans of cities, they were not plans as we should understand the word, but a sort of jumble, half plan and half perspective, such as we often see in old maps. Furniture in those times often appears to have taken the form of animals, as we may see in some of our own Saxon MSS.; in other cases it was carved into little arcades and divisions, then gilt and incrusted with glass or some other coloured substance. To this kind of furniture our bamboo pattern (if not really derived from the plant) bears the greatest resemblance.

If we want to ascertain how our ancestors in the Middle Ages managed the furnishing of their apartments, we have three great sources of information open to us, and by putting together what we learn from each we may arrive at a very satisfactory solution of the question: these sources are, first, the few articles which have escaped the hand of time and of man; secondly, the illuminations in MSS., the written descriptions and sculptured representations; and, thirdly, the actual domestic life of the East. Thus could we transport ourselves back to the thirteenth or fourteenth century, we should find the interiors of the apartments very nearly as commodious, and very much more artistic, than those of our own. Say we were in the royal palace of Westminster, we should find the ceiling boarded, with paintings on it, generally stars on a green ground; sometimes painted subjects, introduced either in the circles or as heads in a border[b]: the walls, if the apartment is

[b] See Parker's Domestic Architecture, vol. i. The term wainscoting (*lambruscare*) is generally believed to apply to the sides of apartments. However,

a simple one, are simply white, with a pattern in red lines, after the fashion of masonry, (as the term then was,) a floriated border running immediately below the ceiling; if, upon the other hand, the apartment is a rich one, the walls have an imitation curtain up to a certain height, and then picture-subjects above. There were two distinct sorts of these; one, where the work was done "decently," without gold and azure, in fact, in lampblack, red and yellow ochre, such as we see in all old churches whenever the whitewash is taken off; and the other, in full and brilliant colours, with burnished gold ornaments, such as the past generation had the privilege of seeing in the painted chamber. But the great feature of our mediæval chamber is the furniture; this, in a rich apartment, would be covered with paintings, both ornaments and subjects; it not only did its duty as furniture, but spoke and told a story. Very few specimens of this kind have reached us; for, whenever the painting was destroyed, the absence of carving gave little inducement to preserve the wood, and we are thus reduced to examples that can almost be counted on our fingers. Thus, there is a press in the cathedral at Bayeux, which has been drawn in the work of my friend Mr. Nesfield; there is another, rather later, in the treasury at Noyon; there are also one or two examples in the Uffizii at Florence. We have our own coronation chair, the sedilia, and retabulum at Westminster, although all in bad condition; there is also the shrine of St. Ursula at Bruges, to say nothing of the numerous marriage-coffers so frequently found in Italy, although they are of later date. Such furniture as this must have been well worth seeing.

But to return to our thirteenth-century room. The floor would be paved with small tiles, very much as we see almost everywhere in France at the present day, and in summer it appears to have been the fashion to strew sweet-scented heaths on it, a fashion concerning which we have plenty of documentary evidence, although it is never shewn in MS. illuminations[c]. Most probably our apartment would have a bed in it, such as we frequently see in France; there would be a great chair,

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a careful reading of the various documents where it occurs has induced the author to believe that it was a way of decorating the ceilings.

[c] The custom is however very distinctly shewn in one of the woodcuts in the 1499 edition of Polyphilus.

and sundry divans, or benches, against the walls; the windows would be glazed and furnished with shutters; and, as far as I am able to judge, the woodwork would probably be painted.

At the end of the fourteenth century, and during the fifteenth, this painted furniture was gradually supplanted by carved oak, and the walls were hung with tapestry, or sometimes panelled; the divans still continued, and in France and Belgium the glass, instead of being placed in the groove of the stone, was fixed in a wooden casement, placed at the back of the mullion: the lower part of this casement having no glass, but simply a lattice to keep out the birds; in bad weather it was closed by means of shutters[d]. As the walls were very thick, seats were got in the window-jambs; and very pleasant places they must have been. Sauval's description of the old Louvre of Charles V. will give a most excellent idea of what a royal palace consisted at the end of the fourteenth century, while the following extract from Laborde's *Emaux du Louvre* shews us the interior of the mansion of an opulent citizen; the extract is taken from Guillebert de Metz:—

"The house of Jacques Duchié in the Rue des Prouvelles, the doorway of which is carved with wonderful art. In the court were peacocks and other birds of pleasure. The first hall is embellished with divers pictures and sentences attached to the walls. Another hall is filled with all manner of instruments; another hall is garnished with chess-boards, tables, and other games in great number. Also a beautiful chapel, where there were desks to put books upon, of wonderful art; also a study, where the walls were covered with precious stones, and spices of sweet odour; also a chamber, where there were various sorts of fur; also several other chambers, richly furnished with chairs, tables ingeniously carved, and apparelled with rich cloths and carpets; also, in a high chamber, were a great number of cross-bows, of which some were painted with beautiful figures; there were standards, banners, axes, guisarmes, coats of mail, targets, shields, cannon and other engines, with plenty of armour. Also there was a window, made with wonderful artifice, by which you could put out a head of iron, so that you might see and speak to those outside without danger; and at top of all was a square chamber, with windows on three sides to overlook the town, and when people dined there wine and meats were raised and lowered by means of a pulley, because it was too high to carry things up; and above the pinnacles of the house were fine gilt images. This Master Duchié was a fine man, very respectable, and well known. His servants were civil, clever, and of pleasant appearance; among whom was a master carpenter, who continually worked at the hotel."

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[d] Ancient wooden casements are very rare; they are, however, still to be seen *in situ* in the hall of the Palais de Justice, Rouen, and elsewhere.

Had Master Duchié lived in the present day he would have been a collector of Roman pottery, medals, coins, Sevres china, and other what-nots; all of which he would probably have kept in some ugly brick house in a fashionable square. Luckily for him, in 1407 there was a national art upon which he could depend for having his entrance doorway carved with marvellous art. He evidently made his house as beautiful as possible, and then filled it with all the rarest and best things produced by his contemporaries.

In Italy the fashion of painted furniture continued much longer; probably the best account of it will be found in Vasari's Life of Dello Delli:—

"And this peculiarity he turned to very good account, since it was the custom at that time for all citizens to have large coffers or chests of wood in their chambers, made in the manner of a sarcophagus, and having the covers or tops variously formed and decorated. There were none who did not cause these chests to be adorned with paintings; and in addition to the stories which it was usual to depict on the front and cover of these coffers, the ends, and frequently other parts, were most commonly adorned with the arms and other insignia of the respective families. The stories which decorated the front of the chest were, for the most part, fables taken from Ovid, or other poets; or narratives related by the Greek and Latin historians; but occasionally they were representations of jousts, tournaments, the chase, love tales, or other similar subjects, according as it best pleased the different owners of the chests. The inside of these coffers was then lined with linen, woollen, or such stuffs as best suited the condition and means of those who caused them to be made, for the better preservation of the cloth vestments and other valuable commodities stored in them. But what was more to the purpose for our artist, these chests were not the only movables adorned in the manner described, since the balustrades and cornices, the litters, elbow-chairs, couches, and other rich ornaments of the chambers, which in those days were of great magnificence, were beautified in like manner, as may be seen from numberless examples still remaining through all parts of our city. And this custom prevailed to such an extent for many years, that even the most distinguished masters employed themselves in painting and gilding such things. Nor were they ashamed of this occupation, as many in our days would be. The truth of what is here said may be seen at this day: among other instances, in certain coffers, elbow-seats, and cornices in the chambers of the magnificent Lorenzo the Elder, of the house of Medici, on which were depicted—not by men of the common race of painters, but by excellent masters—all the jousts, tournaments, hunting parties and festivals given by the duke, with other spectacles displayed, at that period, with so much judgment, such fertility of invention, and such admirable art. Such things, in brief, may be seen, not only in the palace and older houses belonging to the Medici, but relics of them remain in all the most noble dwellings of Florence. Nay, there are many of our nobles still attached to old usages, who will not permit these decorations to be removed for the purpose of being

replaced by ornaments of modern fashion. Dello, therefore, of whom we have said that he was a good painter, more especially of small figures, which he finished with much grace, devoted himself to this occupation for many years, to his great profit and advantage. He was almost exclusively employed in painting coffers, elbow-chairs, couches, and other things in the manner above described, insomuch that this may be said to have been his chief and peculiar profession. But as nothing in this world remains fixed, or will long endure, however good and praiseworthy it may be, so, refining on this first mode of ornament, the custom prevailed, after no long time, of forming richer decorations, by carvings in natural wood, covered with gold, which did indeed produce most rich and magnificent ornaments; it also became usual to paint such matters of household use, as are above described, in oil, the subjects being beautifully depicted stories, which then proved, and still continue to make manifest, the riches and magnificence of the citizens who possessed, as well as the ability of the painters who adorned them[e]."

We have also to thank Italy for the invention of marquetry, which is also found in some of the very early sixteenth-century German woodwork; but marquetry such as we see at Assisi and at Sienna is a very different affair to that employed during the last century and at the present day; the latter is simply a veneer, and, like all veneers, very liable to destruction if neglected and exposed to damp. On the contrary, the old Italian artists cut their incisions nearly a quarter of an inch deep in the solid wood, and filled them up with a piece of corresponding thickness. It is needless to state how the Cinquecento of Italy and the Renaissance of France changed the details and subsequently the shapes of the furniture; the seventeenth century is famous for the wonderful cabinets manufactured in Germany, and which employed so many different hands to bring them to completion; one of these is known to have required no less than thirty workmen and artists; there is a very fine specimen in the Hotel de Cluny. Buhl, so named from its inventor, the upholsterer of Louis XIV., also made its appearance about the same time, viz. the end of the seventeenth century: while those amongst us who admire the works of the last century run after the furniture of Chippendale, who appears to have been the fashionable upholsterer, when Adams was the fashionable architect, when Cypriani did the decorative paintings, and Jackson the pretty ornaments; in fact, in the dark ages of art.

Now, before going into the subject of what may possibly be

[e] Vasari. Mrs. Forster's translation.

done to improve the interiors of the wretched brick houses we are at present condemned to inhabit, it may perhaps be as well to give a slight glance at the various processes whereby our furniture may be decorated; remembering that there is no reason why, like Master Duchié, we should not have every room different, not only in its decorations, but in its furniture. Furniture may be divided into two great classes: first, where the wood shews, and is decorated in various manners, such as inlaying; and, secondly, where the material is concealed by painting or gilding.

And first where the wood is shewn. It would take me far beyond my limits were I only to enumerate the various woods used in upholstery; sufficient to say, that there are many woods which, from their rarity or from other causes, can only be used as veneers; others, on the contrary, are good to form the body of the article itself, such as walnut, oak, beech, pine, mahogany, and perhaps ebony, although the latter is so liable to twist that it is generally safer to apply it as a veneer or in small pieces. Now the wood thus forming the article is decorated in various ways; the most simple is the early marquetry or tarsia, i.e. lines or holes are cut in the surface and then filled up with various substances, such as other but different coloured woods, metals, mother-of-pearl, ivory, and bone, like the Venetian-work of the sixteenth and seventeenth centuries: or, if an inferior sort of work, it could be covered with a veneer; this veneer may either be of different coloured woods to marquetry, or of metal and shell (Buhl). For ordinary work, thin veneers of different coloured woods, or the metal and shell are placed one over the other, the pattern traced on the uppermost, and the lines followed by a fine saw. This is the more common sort of work, but it has the disadvantage of shewing a glue-line, representing the thickness of the saw, when the whole is put together; there is also a considerable waste of material, for only a small portion of each veneer can be used. The more correct way is to make a correct tracing of each piece, and to paste it on the veneer, and then to cut it out, separately; if care be taken when all the pieces are put together no saw-line will appear. Of course there are some colours required which are not to be found in nature, such as the blues; in this case dyeing is resorted to. Shading is obtained by means of hot sand,

and finally, the details are put in by means of the graver. The Italians are very skilful in marquetry, and in the late Italian Exhibition at Florence there were some excellent figure-subjects done by this process. Again, there are various sorts of Buhl-work; for the metal can be varied, and colour placed on the back of the horn or tortoise-shell. We may dismiss the veneers, marquetries, and Buhl with the remark that, although they can be used in domestic furniture, which is carefully attended to, they are hardly fit for monumental work, such as stalls, lecterns, or roodscreens, where they would be subjected to neglect and rough usage.

A very curious, and by no means uncommon, kind of work was to make the article of furniture in cypress wood, and then to draw designs with common ink, sinking the grounds to the depth of an eighth of an inch; this manufacture appears to have been peculiar to Venice and Spain. There are also many other ways of decorating furniture where the wood is shewn; such as ornaments of metal, generally gilt; insertions of marbles and the coarser sorts of precious stones, as agate, malachite, and cornelian; enamels, mosaics, little paintings, electrotypes, pieces of china and majolica, coloured glass, as in the Westminster work, where it is used in great profusion; looking-glass, ivory, and talc, &c. Wood is also frequently stained, especially if of a light colour. As to carving, I reserve what I have to say about it until I notice the ecclesiastical furniture.

We now come to those instances where the wood is entirely covered. First of all, it may be painted, either plainly or ornamentally; if the latter, there is literally no end to the art and decoration that can be lavished upon it. Two things should be kept carefully in view, viz. that the paintings be kept flat, without landscape-backgrounds; and, secondly, that they judiciously alternate with ornament. The works of Marshal, Morris, and Co., in the late Exhibition, were excellent examples of this way of treatment, but then the Firm are all artists, so that we have a right to expect better things than we generally find. Of course it was not to be expected that gentlemen who had been brought up to consider Palladio and the five orders as the acmè of architecture should admire this style of work; their idea of mediæval furniture being derived from Wardour-street. Accordingly, many were the savage at-

tacks upon it; one critic charitably advising the purchaser of a particular cabinet to frame the pictures and burn the rest. I can only say that I hope to see a very great deal of this furniture executed, for it speaks and gives us ideas—but then some people dislike nothing so much as ideas, and, upon the whole, would rather not think at all.

An excellent way of painting furniture is to rub down the paint, and every coat of varnish or lacquer, as is done in carriage painting; the result is a beautifully smooth polished surface, admirably adapted for drawing-room furniture; it can then be gilded.

The Japanese are great masters in this art, especially in their raised and burnished gildings. By means of their lacquer they effectually prevent the gold and silver from oxydizing. Colour is occasionally employed to assist the gold, but always very sparingly.

Gilding is also employed on the more prominent parts of furniture made of dark wood, but for this purpose it is almost imperative that the ground should be dark, otherwise it is apt to have a gingerbread effect. Some pieces of furniture are entirely covered with gilding, such as the coronation chair at Westminster. Here the ornament is obtained by engraving the gesso ground before the gilding is applied. After the burnishing the details were added by means of small punches, or points; and pieces of glass, probably imitating enamels, completed the decoration: I have detected no traces of painting, but the chair is so dilapidated that it is quite possible that it may have been used and quite disappeared. In other cases, parts of the gesso ground were raised, the whole gilt, burnished, and even partially coloured, the details being rendered partly by punching and engraving, and partly by black lines[f]. In the Westminster retabulum the imitation enamels and jewels are introduced in the gilding. Such was a common way of ornamenting marriage-coffers in Italy. Furniture is often partially or entirely covered with gilt or stained leather, velvet cloths, &c., besides being studded with gilt nails. Now, given all these various ways of decorating our furniture, how is it that the interiors of our rooms are so very uninteresting? We arrive at the old answer, No distinctive architecture, and no colour around us in

[f] This kind of work is occasionally seen on the Italian marriage-coffers.

our daily life. Still in this case the affair at least is in our own hands. Very few of us can expect to build our own houses, especially under the abominable system of leasehold, which encourages bad architecture and flimsy construction. Again, no one would so defy fashion, public opinion, and, above all, his tailor, as to appear in public with a costume different from the very ugly one at present worn; but the interior of our own house, at least, is at our disposal, and if it is bad, it only shews that we lack either industry or education to make it better.

In the first place, how is it that we always have a wretched white ceiling over our heads, which hurts our eyes whenever we look up. In Rome the ceilings are always painted, even in the poorer houses; why should they not be done so here? Builders, and what are called practical men of the present day, tell us that our flat plaster ceiling is the only one which keeps out the sound of footsteps or voices in the room above. This I very much doubt, but even if it were the case there is no reason for leaving it one flat mass of white. In many cases the cost of the tasteless cornice which runs round would be sufficient to afford some sort of decoration, and so relieve the monotony.

Again, ceilings can be boarded instead of plastered, and the joints of the boards covered with fillets, thus dividing the whole space into narrow longitudinal compartments; or the fillets can be nailed on in patterns, and the interstices ornamented; or the bellies of the joists may be made to shew; the boarding, pugging, &c., being placed about one inch higher; or the space between the joists may be filled with little domes and other patterns, such as we see in the cathedral at Messina; leaden ornaments, gilt, can be attached to various parts, and the ceiling of the tribune of the Uffizii shews us what a beautiful dome can be made of oyster-shells. The advantage of a wooden ceiling over a plaster one is that it can be easier cleaned, whereas the latter is liable to become discoloured in London, particularly in houses where people will hurt their health and eyes by the use of gas, without proper means of ventilation immediately over it.

We now come to the walls. Of all the horrible inventions of modern times, perhaps that of covering the walls with an immense sea of diaper, printed on paper, is the very worst. Our ancestors either painted their walls with distemper on the

plaster itself, or hung tapestry round them; but if we look at illuminated MSS. which shew the interior of rooms, we shall find that tapestry, with diapers on it, was always countercharged. As far as I have been able to ascertain, the people of the Middle Ages had a horror of a continuous mass of diaper. It is true they very frequently did make use of diaper, but always as a background to subjects, and in small quantities. At the same time it is by no means recommended that painted walls should exhibit a multiplicity of colours; on the contrary, red and yellow ochre, with black and white, will be found quite sufficient in most cases: thus a good plan is to colour the lower part of the wall one colour, say red, up to about 6 ft. 6 in. from the ground, and then to place a lath of wood, say 3 in. by $\frac{1}{2}$ in., laid flat against the wall, the lower side of this containing hooks wherewith to hang pictures, the said pictures being on a level with the eye. If the room be a principal one, the lower part may have an imitation curtain, or even a wainscoting, with divans all round. Immediately below the ceiling comes a deep border, with foliage, animals, children, shields, &c., which does duty instead of our modern cornice, besides being a great deal more interesting: then between this border and the lath, or the wainscoting, comes the decoration proper; and here, if you must have a wall paper, is the space for it, or stamped leather, or the imitation of it. Now I do not for one moment suppose that all of us can expect to have our rooms decorated with original designs by good artists; the thing is simply impossible; but there is no reason why the decorator should not obtain several good compositions, and then have a staff of pupils, or assistants, who should be able to trace off the outlines and fill up the colours. Of course this would do away with the usual papering every four or five years, because when people had got a good thing they would like to keep it. Again, the wainscoting might be carried up to the ceiling, the panels being painted with various sorts of fruits and flowers, like the abbess's chamber in the Abbey of St. Armand at Rouen[g]: or if the apartment is small, and is wanted to be exceedingly rich, subjects might be carved on pieces of bone, and then joined together, relief of colour being obtained by means of

[g] This panelling was taken down and sold in 1854; it is now in a house on the outskirts of the city.

ebony. One of the most charming apartments it has been my lot to view is at Munich, where the walls are of scagliola, with heavy gilt frames inserted; within these frames are portraits.

The windows next claim our attention. Why they should be filled by great pieces of plate-glass I cannot conceive. If you want to look out, by all means have plate-glass at the bottom; but why at the top, where there is nothing to see but the sky. The top part might be filled with lead or cast-iron glazing, and if the lead is well cemented, and the glass good stout British plate, very little cold will come in: besides, a large thin pane of common glass can always be placed before or behind. In these lead lights there might be occasional insertions of what are called roundels, i.e. little subjects done in brown enamel on white glass, the whole being surrounded by a thin border of coloured glass. The shutters might be treated like the wainscoting, but the architraves round both them and the doors should be reduced to the simplest form; indeed, with a little ingenuity they might (i.e. those of the shutters) be got rid of altogether, and the shutters made to fold back against the wall. As to curtains, as the writer in the "Corahill" most justly remarks, all they require is a light iron rod and brass rings; in length they should but just touch the ground. But the decoration of our windows need not be confined to lead glazing or plate glass; we can use the plaster windows of the Eastern nations, and fill in the interstices with coloured glass, thin mother-of-pearl, or even agates and other transparent stones.

Again, our chimney-pieces, for which we often give large prices, have no occasion to be made of marble; on the contrary, stone, painted and gilt, looks quite as well, if not better; but then it should not be a thin veneer applied to an opening, but it should be part and parcel of the house, and should project well into the room, and have a deep frieze with stories or coat-armour sculptured upon it. The grate may be simply a basket supported on dogs, so that it can easily be taken away to be cleaned.

As to the floor, the simplest way is to stain or paint it, and then place in the middle a square piece of carpet, surrounded with a border. The yards upon yards of carpet cut up in order to cover the whole room is simply wilful waste, and answers no other purpose than to increase upholsterers' bills.

As to the furniture of such a room, we are left to choose

between the processes of decoration I have described above. If the wood itself shews, it is perhaps as well to keep the articles as light as possible; if, on the contrary, they are to be painted, an inferior wood, such as fir, may be used for the purpose, and then a little extra strength will not be amiss. There are plenty of examples of tables and cabinets, but the Middle Ages has left us very few chairs, I mean chairs in our acceptation of the word: perhaps the nearest thing is the modern Crystal Palace chair, value two shillings, with a rush bottom; this, when painted and gilt, makes by no means a bad article.

At the same time a much greater use might be made of divans. Going all round the room, they require to be made very low and very wide; they might even be made movable, while the insides can be made into spaces for keeping tablecloths and other things. Those who have travelled in the East can alone tell how very inexpensive is a divan; made of the roughest carpentry, it is covered with a cheap carpet, and a few cushions complete the affair.

Ecclesiastical woodwork, like domestic, presents a very wide field for art; and it is to it that we are indebted for the best remaining specimens of carving in wood. Perhaps the most wonderful example of all is the stall-work at Amiens. There the forms are sufficiently massive, in fact, it could not be called light work; but, on the contrary, nothing can be thinner, lighter, and more undercut than the mouldings; they positively shoot forwards. Again, ecclesiastical furniture, as it is not made to be moved about, should be made much heavier than domestic; and as it is liable to neglect and moisture, veneers, marquetry, and buhl-work should be discarded; at the same time, a great deal can be done by inlays, but then they should be very deep, like the old Italian examples, say $\frac{1}{4}$ in. Some woodwork appears to have been painted from a remote period: thus the stalls at Chichester were painted chocolate, with gilt ornaments; this unfortunately has been removed, although I am informed that entries of the repainting the stalls occur continually in the accounts of the cathedral; the stalls themselves were of the thirteenth or fourteenth century, but the painting appeared to be about the time of Henry VIII.

The carving of ecclesiastical woodwork is a point demanding the most careful consideration, in fact, far too wide a field to enter upon on the present occasion. It requires to be kept

rather flatter, and at the same time more undercut than that in stone, and, as far as my experience goes, is exceedingly difficult to get well executed, especially the figure-work. The Committee of the Architectural Museum did exceedingly well last year in giving their prize to the best wood figure-carving, and although no one of the specimens forwarded were what could be considered first-rate, yet they were quite as good, perhaps better, than the specimens of stone carving sent in for prizes to the same Society. In our modern churches the woodwork is the part which is always the most starved, whether we look at the open groined roof with its thin boarding, or the miserable apologies for stalls. Indeed, I much question whether, in all the late revival, one really good and complete set of stalls and canopies has yet been done, I mean with figures and subjects sculptured as of old; but I should find it difficult to count the innumerable Louis XV. cabinets, which have found ungrudging purchasers, despite of their bad art and ugliness. The fact is, that we like to spend our money solely on ourselves; and this, combined with the law of leasehold, is sufficient to account for the very little good woodwork in our churches, and the miserable appearance of the interior of our houses.

THE WEAVER'S ART.

Of all antiquarian studies there is perhaps none more interesting than that of costume; for if our enquiries into the architecture and decorations of past ages enable us to conjure up scenes that have long passed away, a knowledge of costume gives us the power of peopling those scenes, and of realizing the descriptions of the chroniclers, which would otherwise be but so much dry history. From the destruction of the Roman empire until the end of the thirteenth century there was really but little essential change in European costume; the antique tunic still held its place, it was generally girded up, and had tight sleeves. Over this rich men wore another tunic, not girded, which came down to the calf of the leg. The sleeves of this were sometimes shorter and sometimes longer than that of the under-tunic, and above all came the cloak. The hood was a separate garment, and could be worn with or without the cloak, being indeed a far more comfortable head-covering than anything we possess, for not only did it cover the head, but it also most effectually prevented the weather from penetrating to the neck. About the middle of the fourteenth century architecture began to change for the worse, indulging in tracery, crockets, pinnacles, small mouldings, and such like vanities, and the costume followed the bad example. Instead of the flowing dresses falling into folds, every vestment was made tight to the body; and although during the fourteenth, fifteenth, and sixteenth centuries the colours were brilliant and the *ensemble* highly picturesque, there were too many offences against good taste and right principle for us ever to regret the loss of it. The acme of bad taste was reached in the last century, when men wore large wigs, and when hardly one single article of dress was elegant or fell into its natural folds; but still there was colour. In the present day our dress, with the exception of the abominable chimney-pot hat, is a little better as regards form, but still dreadfully unpicturesque and totally without folds. As to colour, it has utterly disappeared, with the exception of a small spot round the neck in the shape of

the scarf. Nor are the ladies much better; their dress followed nearly the same vicissitudes as those of the men, being anciently little more than a series of very long tunics one over the other, so arranged as to allow the under ones to be seen; sometimes slits were cut in the upper ones for the same laudable purpose, more especially to shew the girdle, and were christened by the satirists of the day as "the devil's peep-holes." Sometimes the under gown became tight to the body, the skirt being made full by means of gores, as at the end of the twelfth century, and again in the fifteenth. The present fashion of making the body tight and plaiting the skirt round the waist may be traced to the beginning of the sixteenth century in Germany, and among other examples may be seen in Albert Durer's "Melancholy," as it is called, but which is really the Genius of the Industrial Arts.

Now in the Middle Ages it was a very different affair as regards costume from what it is at the present day, when it is almost impossible to tell any man's station in life from his dress, and when you may travel for hundreds of miles in the same railway carriage with a nobleman without for one moment suspecting him to be anything more than Mr. Smith or Mr. Brown. In the Middle Ages, as I said before, it was very different, for the richer classes largely imported beautiful stuffs from the East, and afterwards from Sicily and Italy. Of course nothing is more perishable than worn-out apparel, yet, thanks to documentary evidence, to the custom of burying people of high rank in their robes, and to the practice of wrapping up relics of saints in pieces of precious stuffs, we are enabled to form a very good idea of what these stuffs were like and where they came from. In the first instance they appear to have come from Byzantium, and from the East generally; but the manufacture afterwards extended to Sicily, and received great impetus at the Norman conquest of that island; Roger I. even transplanting Greek workmen from the towns sacked by his army, and settling them in Sicily. Of course many of the workers would be Mohammedans, and the old patterns, perhaps with the addition of sundry animals, would still continue in use; hence the frequency of Arabic inscriptions in the borders, the Cufic character being one of the most ornamental ever used. In the Hotel de Clugny at Paris are preserved the remains of the vestments of a bishop of Bayonne, found when his sepul-

chre was opened in 1853, the date of the entombment being the twelfth century. Some of these remains are cloth of gold, but the most remarkable is a very deep border ornamented with blue Cufic letters on a gold ground; the letters are fimbriated with white, and from them issue delicate red scrolls, which end in Arabic sort of flowers: this tissue probably is pure Eastern work. On the contrary, the coronation robes of the German emperors, although of an Eastern pattern, bear inscriptions which tell us very clearly where they were manufactured: thus the Cufic characters on the cope inform us that it was made in the city of Palermo in the year 1133, while the tunic has the date of 1181, but then the inscription is in the Latin language. The practice of putting Cufic inscriptions on precious stuffs was not confined to the Eastern and Sicilian manufactures; in process of time other Italian cities took up the art, and, either because it was the fashion, or because they wished to pass off their own work as Sicilian or Eastern manufacture, imitations of Arabic characters are continually met with, both on the few examples that have come down to us of the stuffs themselves, or on painted statues or sculptured effigies. These are the inscriptions which used to be the despair of antiquaries, who vainly searched out their meaning until it was discovered that they had no meaning at all, and that they were mere ornaments. Sometimes the inscriptions appear to be imitations of the Greek, and sometimes even of the Hebrew. The celebrated ciborium of Limoges work in the Louvre, known as the work of Magister G. Alpais, bears an ornament around its rim which a French antiquary has discovered to be nothing more than the upper part of a Cufic word repeated and made into a decoration. Both what is called the Lombardic character and the black letter are admirably adapted for borders of woven fabrics, and indeed for ornament generally, but they were seldom used. In modern times we find black letter inscriptions rather profusely used in the Houses of Parliament, but unfortunately they are so managed as to be almost illegible.

Very curious is the piece of stuff found at Palermo in the tomb of the Emperor Henry VI., who died in 1196. The pattern consists of antelopes and parrots placed face to face, the ground being filled up with some Arabic-looking foliage. The animals and ornaments are in gold, but the ground at present

is a reddish murrey colour silk, although in all probability it was originally what was called the *diarhodon*, which we are told strikes the look with the appearance of fire. The other shades of the same colour were the *rhodinum* and the *leucorhodina*, which were probably rose colour and pink respectively. Many other pieces of stuff have been preserved and published, for example in Willemin's *Monuments inédits*, but they all appear to have been designs in small patterns, and very nearly agree with the modern Indian kincob, and they mostly contain some sort of bird or animal. The patterns then became gradually larger until the middle of the fifteenth century, when what may be called the pine pattern became very fashionable; as this pattern was very large, it was not very often that much of it could be seen, but as it was generally made of gold and velvet, besides being full of small details, the effect was always good, even when only a small piece was used.

In the Museum at South Kensington will be found a most valuable and interesting series of examples of ancient woven fabrics, as well as those decorated with embroidery, and in them the increase of the size of the pattern can be most distinctly traced. Some of the diapers are very curious; one of them consists of a series of castles, in each are two men holding hawks: the size of each diaper being about 6 in., and the date the fourteenth century. Another pattern is composed of angels with censers, executed in yellow on a purple ground, powdered with yellow stars; the carnations and the clouds from which the angels issue are white. But the most gorgeous of all are the large patterns, executed in cloth of gold and red velvet, more especially when the gold wire is raised and looped. A fine piece of this sort of work forms the centre of the well-known pall of the Fishmongers' Company.

But however rich might be the stuffs, our ancestors were by no means contented with them; on the contrary, the desire to possess what no one else possessed very often induced them to call in the aid of embroidery; this consisted of embroidery proper for the more precious articles, and of *appliqué* for those of less value. For instance, the surcoat of William Earl of Albemarle, *temp.* Henry III., published in the *Vetusta Monumenta*, is executed in this manner. As to the embroidery proper, it reached such an excess that Philippe le Hardi had some garments which had cost him 800 Parisian livres, or

about £1,200 of our money. Joinville, who gives us this information, says that he "never saw a single embroidered coat or ornamented saddle in the possession of the king his father or of any other lord. He (the king) answered that he had done wrong in embroidering his arms, and that he had some coats which had cost him 800 Parisian livres. I replied that he would have acted better if he had given them in charity, and had his dress made of good sendal, lined and strengthened with his arms, like as the king his father had done." Our own King Henry III. was far from setting so good an example to his contemporaries as St. Louis did. Among other instances of his extravagance in the matter of embroidery may be cited the altar frontal given by him to Westminster Abbey. The account begins with the canvas, and the wax for waxing it; then follows six marks of gold and the making them into thread; then we have two pounds of white silk and the same of yellow; five marks and a half of pearls; two marks of large pearls for the border; one pound of thick silk; the wages of four women working on the aforesaid cloth for three years and three quarters; 786 enamels for the border; 76 great enamels; 550 garnets for the border—for gold and for the making of the settings of same — for silver picture placed under the enamels, &c. The whole expense of this piece of embroidery must have reached some £4,000 of our money.

But embroidery, expensive as it was, by no means satisfied the rich of those days; jewels, and more particularly pearls, were in great request for what are called the orphreys, i. e. the borders of garments. When the tomb at Palermo of Constanza, the consort of the Emperor Henry VI., was opened, the orphreys of her dress were found to be composed of gold filagree, gold cloissonné enamels, and the rest of the ground filled up with small pearls; the whole sewed on linen.

Occasionally the ornaments of dresses were made of solid metal sewed on to the stuff: Henry VIII. and his courtiers are related to have worn such dresses, i. e. powdered with solid ornaments, at a grand feast, and afterwards let the people strip off the said ornaments. The Japanese robes of state are also decorated in a similar manner; and Oliphant, giving a description of the dresses of the Commissioners for signing the treaty made by Lord Elgin, says that one gentleman had his robes elegantly ornamented with silver skulls. I have only met

with one specimen of the bullion ornaments, occurring in the black letter inscription on the belt of the horn of Charlemagne in the Treasury of Aix-la-Chapelle. The belt is many centuries later than the horn, which appears to be authentic, being evidently Eastern work, and bearing out the tradition that it was a present from Haroun al Raschid.

It has often been remarked that if we want to see what the Middle Ages were like we must go to the East; accordingly, if we examine duly the stuffs made by our fellow subjects in India we shall see very nearly the same things produced in the present day as were executed centuries ago in Europe. Thus, in the excellent Indian Museum, which is by no means either visited or studied as it ought to be, we see kincob made of silk and gold, nearly identical with that discovered in the tomb of the Emperor Henry VI.; the details are a little different, but by no means so to any very great extent, while the judicious mixture of geometrical forms with conventionalized natural details is quite as good, if not better, than anything we have in Europe. For the very geometrical lines are softened and subdued by being made up of foliage, which is kept totally distinct from the other foliage enclosed in the reticulation made by the geometrical lines. Take, again, the famous Cashmere shawls which command such fabulous prices; an expert will tell you that he can distinguish a French or English imitation from the real article at a very long distance; the colours of the original being richer and more harmonious, and yet these Indian shawls are done by the rudest machinery and in innumerable small pieces sewn together afterwards. But then the workman works as his fathers have worked, and at well-known patterns, and is not obliged to bring out novelties for each season. The Indian embroidery also is wonderful, and very cheap comparatively speaking, and yet if any one article be examined, infinite art will be discovered by the countercharging of the grounds, &c. Some table-covers in the Indian Museum are beautiful examples of this. Probably embroidery reaches its climax in the cloth of gold, which is embroidered in gold thread so as to produce a raised pattern, relief of colour being got by the introduction of pearls or beetles' wings.

Beautiful also are the muslins, some almost as thin as air, others printed in gold, an art we have only learnt since the Exhibition of 1851, when we first began to have an idea that

our manufactures were susceptible of improvement, and that the inhabitants of the East were something more than barbarians, and that they had also a civilization and art of their own, quite as good in many respects as ours, although they did not happen to have the electric telegraph, lighting by gas, and other modern improvements. I am most happy to say that the present Curator of the Indian Museum is just finishing a most excellent work, containing actual specimens of textile fabrics, which, when in circulation, will do very much to remove the prejudices against Oriental art, or rather to shew our own manufacturers that there is still great room for improvement as regards their designers.

Again, look at the carpets of the East: does any one want a carpet of good design and harmonious colouring, what does he do but forthwith choose either a Turkey or Persian one. In the Middle Ages we read of *les tapis Saracenois*, which were made at Paris, and which were probably imitations of Eastern ones. The carpet we see depicted in the old pictures and tapestry is essentially different from either the modern Turkish or Persian designs, and consists of a series of interlacing outlines, which are variously filled up. Mr. Fisher[a] has lately had one reproduced from a painting of Vandyke's, and with those we obtain from the East we have now no difficulty in obtaining carpets the designs of which will suit almost any style of decoration. In all these carpets it will be seen that the border plays a most important part, and probably the last thing that would enter into the head of an Oriental would be to cut out a carpet to the shape of the room and then nail it down, so that it should be impossible to clean the floor without the trouble of unnailing it. Again, with the Easterns a carpet is not a thing to be trodden upon with dirty boots, on the contrary, they are occasionally made of materials which would completely disqualify them for such usage. Witness the two beautiful carpets in the Chinese section of the late Exhibition, one being yellow and the other red, each apparently made of satin and silk, and looking like the richest stained glass. It is by such knowledge that we come to understand about the famous carpet which formed part of the spoils of Ctesiphon when the Mohammedans took that city in 637; it is said to have been sixty cubits square, and re-

[a] Of Southampton-street, Strand.

presented a paradise or garden, the plants being rendered by gold embroidery and precious stones.

Now when we look at the Eastern stuffs of the present day, and the fine pieces of mediæval textile fabrics which have come down to us, we detect two great principles: first a geometrical regularity, and secondly a flat treatment. Flowers are never drawn in perspective, but conventionalized: than which nothing is more difficult to effect, and often we may obtain a better suggestion for our purpose by taking sections of flowers than the flowers themselves. Some years ago, when the Government schools were first established, flowers were considered the end-all, and be-all of design, and we had them put into every fabric, either separately, or scattered over, or tied up in bunches by means of blue ribbons; if any conventionalism was attempted it assumed the shape of a Louis XV. scroll. Fortunately the Great Exhibition of 1851 put a stop to this, and we have gone on improving, more particularly in our fabrics for dresses; but our modern carpets are still very unsatisfactory, and it is really difficult to get a good figured pattern for curtains.

From the peculiar form of our female costume, which hangs in a number of small plaits round the waist, we are unable to use those strongly contrasted colours, or those small patterns in gold, which were so universal in the Middle Ages; but we have other uses for woven fabrics where we can use rich and strongly contrasted colours, as damasks, chintzes, and other stuffs for curtains. There is also no reason why our counterpanes should be usually white, or why costly ecclesiastical hangings, such as altar and pulpit cloths, should not be made in the loom. It is only fair to Mr. Crace to say that some years back he managed to secure the services of the late Mr. Pugin, and some of the articles, such as the tapestry, produced from that gentleman's designs leave nothing to be desired, whether as regards the material, or the flat and conventional treatment of the ornament; unfortunately Mr. Pugin took the style of mediæval art which was prevalent in his day, and consequently his fabrics, although excellent in themselves, do not go too well with our modern development of the same art, which has taken its inspiration from earlier and purer models than he did. Thus, of all animals a lion is perhaps the most difficult to conventionalize, and in drawing the design for a certain chintz he took the drawing of

his lion from the fifteenth century; now this happens to be a very exaggerated type, and very unlike the animal itself, and people consequently object to purchase the queer-looking beast who is sucking his paws. At the same time it must be confessed that for certain things we of the present century have an almost Mohammedan prejudice against the introduction of human or animal figures. This is more particularly the case with regard to textile fabrics. Mrs. X. will admit a bird or two on her chintz curtains, but not an animal, and why? simply because it is not fashionable, and she is afraid of Mrs. Y. paying her a visit, and thus going and telling Mrs. Z. 'that Mrs. X. is such a queer creature, for do you know she has actually got lions on her chintz curtains; and whoever saw lions in that position, and what have they got to do with curtains?' So that for fear of what our neighbours may say we still go on with ugly carpets and furniture, unsatisfactory wall papers, and doubtful curtains, to the destruction of our own and everybody else's good taste.

As long as we follow one another in these matters like a flock of sheep, I really do not see the way to any improvement, and I am afraid that if any improvement is to be expected it must be got by working up to our architecture, not by working down from it. In fact, we have no architecture to work from at all; indeed, we have not even settled the *point de départ*. For one night some gentleman will get up, and, forgetful of the difference of climate and material, implore us to study Greek work, and go on from that for our future architecture; a week or two afterwards another lecturer will recommend early French mediæval art for the same purpose; he will be succeeded by another who will indignantly repudiate everything foreign, and tell us to stick to the thirteenth-century art of our own country; while a fourth will leave the future to providence, but implore us by no means to neglect sketching as many old buildings as possible in the meanwhile, perhaps to give us unity of ideas. Now it is very evident that all these pieces of advice cannot be right, and that some must be wrong, only, unfortunately, we cannot distinctly prove which is right and which is wrong. In the meantime we have no distinctive architecture, and architects' pupils are kept sketching old buildings, carefully distinguishing the mouldings of the thirteenth century from the fourteenth, and the fourteenth

from the fifteenth, when, to my mind, they might be far better employed in drawing the figure and making themselves masters of some of the more obvious and necessary facts of anatomy. It may be objected that we use the figure so little that it is hardly worth learning it. The answer to this is, that if we use the figure very little it is because architects cannot draw it and thus recommend it to their clients, who in nine cases out of ten would give the order for the piece of sculpture if they had only an idea of what it was going to be. It appears to me that our art, especially in this country, is domestic, and that the best way of advancing its progress is to do our best in our own houses. It is probable, if we once manage to obtain a large amount of art and colour in our sitting-rooms, that the improvement may gradually extend to our costume, and perhaps eventually to the architecture of our houses. What we at present stand in need of in this respect is a material which will give us colour, be capable of being washed, and yet not disintegrate. Stone, brick, and stucco all get dirty, and are not able to be cleaned. Marble it is found will disintegrate in this climate, and, as far as I see, the only thing that remains to us is glazed earthenware. Probably some other substance may be discovered, but until we have some means of successfully struggling with the atmosphere of smoke and damp with which we are surrounded, I hardly see how we can expect much improvement in our domestic architecture. Again, the law of leasehold is a most formidable evil, for who will build in a substantial manner when he knows that all his outlay will go to his landlord after a certain time? In the present day we have very wisely given up the attempt to control the markets by legislative enactments, or to regulate what clothes each class of society shall wear, indeed it appears to be generally understood that the less we interfere with such matters the better; but, in the present instance, a law forbidding any man to build on hired land would have, I believe, the happiest effect upon the external appearance of large cities, for many people would try to render their houses as beautiful as possible, knowing that they would descend to their successors.

The reason why I think the future development of our art will be a domestic one, and not a public or ecclesiastical one, is this:—As a nation we have but little out-of-door life, and our public buildings and monuments are generally spoiled by the

most mischievous economy. As to our ecclesiastical edifices, the Church is far from being what she was in the Middle Ages. In the first place, she by no means possesses the revenues she then enjoyed, and instead of being assisted by the State, it is considered the right policy to snub and thwart her in every manner. At present the number of bishops is, I believe, very little more than it was in the last years of the reign of Henry VIII., and when an application was made lately to increase the number it was flatly refused—just as if the army should be allowed no more generals than it had in the sixteenth century. The Church, therefore, at present has no occasion for more cathedrals, and cannot lead the art movement as she did in the Middle Ages. It is true that something has been done of late years, and that, thanks to Pugin and the Camden Society, we have learnt to build churches by recipe, i. e. we know what proportion the chancel bears to the nave, that there should be more light at the east end than at the west; but still that was not art, and the influence in London has simply been confined to ecclesiastical buildings scattered up and down the town, and embedded in masses of the ugliest bricks and mortar. If a public building has been wanted it has been executed in a style which is called Classic, but which would certainly make an ancient Greek or Roman open his eyes very wide indeed. The Church, again, up to the present time has set her face against the arts of painting and sculpture, making as much a superstition of their disuse as the unreformed Church did of their abuse.

Formerly the Church patronized the drama, and the people were admitted into the churches to see the truths of its religion and the principal acts of its divine Founder rendered to their eyes as realities, instead of simply being told to imagine them. Now all is changed. Until late years the theatre presented very many disadvantages, but at present matters are very much better, and if ever we wish it to be what it ought to be, the result will only be obtained by the character of the audience and the wholesomeness of the criticisms.

It is for these reasons that I suspect that the next development of art will be a domestic one, and it rests with all of us, individually, to help it on, by paying attention to the interiors of our houses in the first instance. As to the external helps of the development, I have already enumerated them in my first

lecture: they are, the better education of the designer by a more extended teaching of the figure, and of the public at large by bringing museums and art collections, if not to their doors, at all events to their daily walks; a wiser system of expenditure with regard to our public monuments; a decline of the present ecclesiastical superstition against the employment of painting and sculpture; and, above all, the abolition of the system of leasehold.

These things will certainly not all happen in our day, if indeed any of them do. In the meanwhile, all that remains for us to do as artists is to do our duty manfully against shams and littlenesses, and to direct our pupils' attention to those things which are inimitable under any style of art, viz. the human figure, drapery, and the great principles of composition.

EXTERNAL ARCHITECTURAL DECORATIONS.

It is not now so many years ago since a distinguished statesman and novelist created a very considerable sensation among the Art world by the enunciation of two propositions. These were, firstly, that in the present day we mistake comfort for civilization; and secondly, that as our houses and public buildings all resemble one another, and are all equally wretched, the best way to remedy the evil would be to hang an architect — instancing the very excellent effect the execution of Admiral Byng had upon the naval service. Whether the remedy proposed would have the desired effect, is a very open question—perhaps it might; but that we are too apt to mistake comfort for civilization, and that our modern houses are lamentably poor and remarkably like one another, is unfortunately but too true, for there is probably not another capital in Europe which can come up to us as regards the uniformity and ugliness of our dwelling-houses, to say nothing of our public buildings. In fact, it would almost appear that the great object of the richest city in the world is to spend as little money as possible on its edifices, and when to this is added the fact that in some twenty-five years, or even less, everything is covered with a thick coating of smoke, one is apt to despair of any improvement. Still the state of things, although unfavourable, is not to be despaired of. Could the law of leasehold be abolished, and could the builder be made to build only on land owned by himself, people would spend a great deal more money on houses which they knew would descend to their children. On the other hand, could some material be found capable of being periodically washed without injury, the smoke nuisance would be comparatively harmless. But before going into this latter question, it may be as well to see with what materials buildings have been constructed or faced in former times, and how such facing or construction has been ornamented.

Marble.

To begin with the richest material, viz. marble. This can be applied in three ways, i. e. the building may be entirely con-

structed of it, as the Parthenon at Athens, or it may be faced with it, as the Duomo at Florence, or it may be applied in a thin veneer, as in the various edifices at Venice. It is needless to say that the application of these systems was greatly influenced by the distance of the work from the marble quarries. If, then, we take the first method, i.e. that of the Parthenon, we shall find that the architect had by no means finished his work when he had put the marble blocks together, and had inserted the sculpture; on the contrary, the painfully bright colour of the white marble under a powerful sun necessitated some method by which it might be toned down. This was effected by painting. By this I do not for one moment suppose that large surfaces were covered with coatings of opaque colour; on the contrary, what few remains have come down to our own times tend to shew that the gold and colour was applied in thin lines, but at the same time in strong tints; in fact very much as we see it applied to Parian statuettes. Now the effect of marble thus treated, when viewed from a distance, is that of being suffused with a very delicate tint of the prevailing colour of the painted lines; and in this manner the glare of the white marble was to a great degree counteracted. There is also some reason to believe that the excessive whiteness was occasionally toned down by means of a stain, such as a solution of saffron—more especially as Pausanias mentions the walls of a temple which when wetted gave out the smell of that herb. But the Greek architect did not restrict himself entirely to lines and ornaments; on the contrary, some portions of the building, although not very large ones, were covered with paint, such as the triglyphs and the backgrounds of the sculpture. Again, there is good reason to suppose, from a passage in Pliny, that the walls behind the columns received colour, and even paintings, and as the columns were comparatively close together, this would have the effect of making them stand out well from the wall without sacrificing the general white tone of the whole building. Again, gilt bronze was largely employed for the accessories of the sculpture, as we see in the Elgin Marbles; and one building is mentioned where the joints of the stones were filled in by thin fillets of gilt metal. In the capitals of the columns of Minerva Polias we find glass beads employed as an architectural decoration: and were it possible for us to go back to the Athens of ancient times, I have no doubt but that

we should find a great many things for which we are by no means in the habit of giving the Greeks credit.

Such was the way in which a marble temple was anciently treated. I believe it is a disputed point whether the Greeks, like the Romans, were in the habit of employing coloured marble columns, but that they did not confine themselves to white alone is proved by the string of black marble which may be traced more or less all round the Acropolis, and which probably served as the support of the Gigantomachia.

The second way of treating marble is by building the walls of the edifice with brick or rubble, and then facing it with a coating of marble, say from six inches to a foot thick, according to the necessity. The brick or rubble should be so constructed as to allow of the marble being well toothed in, and hence the very rough appearance such walls present when the marble has never been applied, as is so often the case in Italy. Of course it was always right to give time for the wall to settle well before applying the facing, but somehow or other, in nine cases out of ten, the said facing has been put off indefinitely. The cathedrals of Florence, Sienna, Prato, and Orvieto are instances where it is more or less perfect. In this case the architect generally divided his wall either in horizontal lines or square panels, using for the purpose black, white, and red marble; the red not appearing in any great quantity. The windows, doors, &c., were richly carved and inlaid, while an elaborate tarsia of these marbles, which may be described as a coarse mosaic, (not unlike the Tonbridge-ware patterns enlarged,) ran round the building with the strings, round the arches and jambs of the windows, round the panels, and in fact almost everywhere. Glass mosaic was also occasionally introduced instead of sculpture. The best example of this sort of work is Giotto's campanile at Florence; and although a great deal of valuable material is expended, and a great deal of human labour, still to my mind the effect is hardly worth the trouble and cost. The contrast of the marbles is violent, and the panel system is but too apt to remind one, as it did Pugin, of a Brighton workbox. This facing system is also to be found in Eastern buildings, but there the ornaments and inlays are far more beautiful and delicate than in the Italian edifices. It has not been my lot to see the larger specimens of marble buildings in the East, and I am unable therefore to speak of their effect.

M. Fossati told me that he imagined that St. Sophia at Constantinople was anciently faced with marbles, the spoils of antique temples; all, however, have disappeared, and the building is now plastered over and coloured with red longitudinal bands.

Some of the better fountains in the same city are exceedingly beautiful; they are large square edifices with towers at the angles, faced with marble cut into the most delicate patterns and foliage in low relief, parts of which were doubtless gilt; the grilles, which occupy a considerable portion of the surface and the tops, are in bronze; the overhanging eaves of the high lead-covered roof are boarded underneath, and painted and gilded in various patterns; and the finials on the top of the roof are also gilt. As regards inlaying marble, the Easterns are unrivalled. Some years ago a very considerable quantity of marble was brought into this country from Delhi, and it is even now occasionally to be met with in curiosity shops; the ground is a coarseish white inlaid with black, like slate, green like our Irish green; there is also a yellow marble, and the flowers are formed of cornelian and most beautiful rose-coloured agates.

The examples of the third way of using marble are principally to be found in Venice. Here the columns are solid marble, the walls are brick, and the facing is applied in very thin slabs, secured to the wall by mortar and by metal holdfasts which appear on the outside; the strings, of course, are solid marble, so also is the tracery and moulded work, although the latter is generally avoided, and the arch turned in brick, so that the thin soffit-slabs of marble, when applied, project outward, and thus afford support to the outer casing above. Sometimes the Venetian architect contented himself with making what we should call the dressings only in marble, the walls proper being plastered and painted, sometimes with figures, but generally according to Mr. Ruskin with a diaper, which in the ducal palace has been translated into marble of different colours. In the earlier buildings of a better character, such as St. Mark and the Fondaco dei Turchi, the whole façade was covered with thin slabs of marble interspersed with panels containing sculptures, which often had a gold mosaic ground, or with panels inclosing more valuable marbles, such as porphyry or serpentine, as in St. Mark's, where we find

marble carving, serpentine, porphyry, and glass mosaic in juxtaposition. As also a piece of architectural colour the west front of St. Mark's at Venice certainly stands unrivalled at the present day, whatever the group of buildings on the rock of Athens may have bēen. The picture of Capacchio certainly shews us that we have lost something; but after all it has not been very much, being principally confined to the gilding in the upper portions of the buildings, such as the crockets, pinnacles, &c., some of the ornaments of the latter having been cast in lead.

Stone.

Stone is a more difficult material to treat than marble for external decoration, people being generally content to carve it and there to leave it. This was not the case formerly. The temples at Pæstum and that of Vesta at Tivoli are worked in a very coarse hārd stone, full of holes — a stone that in the present day would probably be rejected for external facing. The Greeks and Romans did not think so: everything is worked in it, and then covered with two thin coatings of plaster; the first stops up the holes and brings it to a fair surface, the latter, which is about one-eighth of an inch thick, is largely mixed with marble dust, so that it can receive a polish. The building had then very nearly the white glaring effect of new marble, and was treated in a similar manner. In the museum at Palermo are some bas-reliefs found at Selinuntum, made of this stone and plastered in the usual manner: some are, it is true, very archaic, but others are post-Phidian, and very beautiful works. Stone, again, in the Middle Ages was used in strips, like marble, alternating with stone of other colours, or with brick, as at Verona; in this case the mass of wall is brick, the stone forming a sort of chain, or rather a series of coffers at certain intervals. A very favourite way of using stone, especially during the fifteenth century, was to make it alternate with bricks or flints, so that the wall looks like a chess-board. In Norfolk the surfaces of stone walls, or rather of parts of them, are cut into elaborate tracery or other ornaments, such as letters, &c., and the interstices filled with flints; and if the flints are cleanly broken and nicely squared the effect is very good indeed. Occasionally ornaments are incised in the stone and then filled up with black cement, as in the porches of Nôtre Dame at Paris, and at St. Etienne at

Beauvais; but this process does not often occur, and would appear to have been reserved almost exclusively for floors. At other times an effect is got by the jointing of the stone, such as a thin course and a thick one alternately, or by making certain portions of the facing reticulated, as in Notre Dame at Poitiers: of course in this latter case the joints should be kept very wide.

In the Middle Ages we find positive colour and gilding applied directly to stone buildings, but then it was confined to sheltered situations, and was executed in oil or in distemper, covered with oleaginous varnishes; thus there are traces of painting on the statues and architecture of many of the French *portails*, such as Amiens, but then they were protected by the great depth of the arch. Coats of arms were generally coloured; the tympana of dormer windows, when protected by the bargeboards, were coloured; and crockets and finials were often gilt. At the Chateau of Blois the windows being deeply recessed from the front, the jambs of the arches which contain them are coloured and gilt. At Florence the projecting machicolations of the Palazzo Publico have emblazoned coats of arms. In fact, our ancestors coloured those parts which could be protected, but, like sensible men, abstained from putting paint where it would be destroyed by the climate.

Brick.

It must be confessed that brick is not a particularly agreeable material to work with; if used alone it is exceedingly monotonous, and if different colours be introduced a piebald effect is very likely to be the result: used with stone dressings of a warm colour is perhaps as good a way as any to employ it, and if the building is to have any architectural features it will probably be found the cheapest, for bricks become rather expensive articles when they have to be cut, rubbed, and gauged. However, effects can be produced by bricks of different colours, although many attempts of late days in this direction can hardly be pronounced successes. Our own ancestors, for the most part, contented themselves with very sparing reticulations of black glazed bricks. At Verona, Padua, and elsewhere in Italy, a very curious mode of decorating brick-work is adopted. Patterns are formed in the voussoirs of arches by cutting away the surface of sundry of the

voussoirs, and then filling up the space so obtained with plaster. At St. Antonio at Padua, the spaces within the terra cotta arches, which form the cornice of the cloisters, are thus filled in with plaster, and have had painted ornaments.

In the north of Italy we find a very great employment of terra cotta, one of the finest examples being the Ospidale at Milan; somehow or other the effect is not pleasing, being too apt to conjure up suggestions of the burning city described by Dante. Much of our modern terra cotta is of a very harsh and bright colour, so much so that it would hardly be an acquisition to any building. A fountain in this Museum, of Austrian manufacture, is an excellent example of what carefully to avoid as regards colour in terra cotta. In our own time a whole medieval church has been constructed of this material, but as the experiment has never been repeated we may presume that it has hardly been a success.

Far better than terra cotta is majolica—here we obtain beautiful form and imperishable colour. Majolica may be either in relief, or painted on a flat surface; the former is more commonly applied as an external ornament, and is by no means uncommon in Tuscany and the circumjacent parts of Italy. It occurs in the form of friezes, medallions, coats of arms, figures, &c.; but I never, as far as I remember, ever saw a façade entirely covered with it. There are some most excellent examples in the South Kensington Museum, foremost among which may be cited the coat of arms with its surrounding wreaths, ten feet in diameter; this, like all large examples, is made in several pieces, all of which had to be properly imbedded in the wall. Similar coats of arms occur in the Or San Michele at Florence, and the Palazzo del Podesta at Certaldo is literally covered with them. The inventor of this majolica was Luca della Robbia, a Florentine sculptor, who set himself to invent, or rather re-invent, a stanniferous enamel to cover his terra cotta figures; I say re-invent, for the secret had been known to the Spanish Moors long before. The works of Luca della Robbia now command high prices, not only on account of their rarity, but for their own intrinsic value, for Luca was a real artist, and got beautiful feeling and expression in his work. Several of his figures are simply in white, with a light-blue background. Afterwards other colours were added, and sometimes the flesh is left unglazed. But with all this the

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general effect of the colour of his figures is never thoroughly pleasing, and I am barbarous enough to think that Minton colours his figures much better.

Glazed earthenware for architectural purposes appears to have been used in Germany at the beginning of the sixteenth century, for Erasmus, in his Colloquies, mentions columns of earthenware glazed to represent marble supporting a portico. The medallions in Holbein's gateway at Whitehall were also of terra cotta, but I do not know whether they were glazed. The angels, however, which surmounted the high altar of Henry the Eighth's Chapel, were glazed to represent marble; and as they were executed under the direction of Torregiano, were most probably of Italian workmanship. Luca della Robbia did not content himself with reliefs; on the contrary, he appears to have painted on majolica as well, if we may trust the series of discs attributed to him, which are preserved in the South Kensington Museum. They represent the labours of the year, and are in three different blues, with black outlines, and white high-lights: they probably formed a decoration for some small building, such as the study of Cosmo the Elder, described by Vasari.

If we want to know what can be done with enamelled majolica, we have only to go to the East. One of the mosques, I think that of Suleyman, has one of its courts covered with large inscriptions and ornaments, painted in blue on white tiles, and I must say that the colour was exceedingly rich, and the result very good indeed. Pieces of plain pottery are found in the campaniles at Rome, and are far more bright than marble would be at that height. Again, several of the churches at Pisa have dishes inserted in their gables; the story being that it was the custom of the Crusaders to bring them home and deposit them in the front of the church as trophies.

In the South Kensington Museum is a figure painted on majolica, manufactured by M. Rousseau of Paris; it was purchased at the Great Exhibition, and it is said that the colours and glazing have been affixed in one firing—a most important discovery, should this sort of decoration ever come into extensive use. The division lines of the various tiles composing the figure follow the outlines, and thus avoid the confusion which would arise had they been made square; as it is, the joints serve to accentuate the outlines like the leading in stained glass.

Plaster.

Few people would suppose that plaster could be rendered ornamental unless it be cast into moulds, or, as in the last century, worked by hand. If, however, we go to Florence, we shall find that with an artistic people even this material is susceptible of high art. To begin with the simplest decoration. In the vicinity of Florence, the rough walls which divide one vineyard from another are covered with plaster: this plaster when wet is covered with very deep scratches; the principal lines run vertically, and the spaces are then filled up with various patterns. This is without the town: within, we find the *graffito*. After a building had received the first coat of plaster, a second was applied, very much thinner and mixed with colour, very often soot; when this was set, a finishing coat was applied over it, and while it was wet the artist scraped it away in various patterns and figures, so as to shew the black ground: the whole, when completed, forms a decoration or picture in black and white. Several houses of apparently the sixteenth century retain this decoration, which in that climate appears to be tolerably durable. It is practised at the present day, and specimens were to be seen at the Florentine Exhibition of 1861. The earliest example I have seen was at Assisi; from the costume the date might be from 1460—1470: it is also noticeable from the fact of the ground being in various colours instead of black. Plaster is also cast in patterns and applied to external surfaces of walls, as in the Alhambra; but then it was probably protected by overhanging eaves. It can be stamped in patterns while wet, as we occasionally see in old half-timber houses in our own country, and even when not stamped it has a very good effect if the wood be only painted a dark colour. At Galata the old Genoese houses are made of indifferent brick, and then plastered and painted; there is no moulded work of any kind; all the decoration is obtained by what we call tuck-joints, i.e. projecting ones, which are made of much finer plaster than the ground. These tuck-joints are left white, while the general surface of the wall is a dull grey; the ornamental bands, which do duty for strings, on the contrary, have their grounds coloured red; the window jambs and lintel are simply great stones on the Stonehenge principle, and the cornice is composed of tiles on edge. Sometimes the wall is made to represent

alternate courses of stone and tiles; in this case the surface of the sham tiles is coloured red. In some of the plaster I detected little pieces of chopped linen which did duty for hair.

Painting.

In a country where the material was not a good one, and where the climate was favourable, a very common way of obtaining decoration was to cover the whole surface of the walls with plaster and then paint it. This, according to Mr. Layard, was the case with regard to Babylon, where sunburnt bricks were used, and distinguished it from Nineveh, where the basement was of stone and the superstructure of wood. At Pompeii we see the same thing. In one of the streets a good part of an external wall remains tolerably perfect; it is plastered all over in the usual manner, i.e. marble dust is mixed with the last coating. For six or eight feet high the wall is coloured red, but divided into vertical divisions by white lines. Above, the plaster is jointed like regular stonework, the joints being represented by broad and deep incised lines, which if I remember rightly were filled up also with red.

In our own country during the Middle Ages, paintings were reserved for the insides of dwellings, and we must, therefore, go to Italy for information as regards external paintings. The custom anciently must have been very common, for in spite of the perishable nature of the decoration, nearly every city can shew some one specimen, if not more. Thus in Florence there is the hospital on the north side of the Baptistery of St. John, besides several other houses which are painted in black and white, and therefore difficult to distinguish from *graffito*. There are one or two houses at Brescia painted in colours, several at Venice, and portions of others at Vercelli. If we read the lives of Maturino and Polidoro in Vasari, we must believe that these artists alone must have painted the fronts of a vast number of houses in Rome. Our author almost appears to intimate that the fashion went out after the sack of Rome by the army of the Constable Bourbon, when all the artists, including the two in question, had to flee. Vasari distinctly states that Maturino and Polidoro worked only in two colours—in fact, did not make regularly coloured façades like those in Venice and Brescia. He praises them for their introduction of antique ornaments, and for the invention they

displayed in their figure subjects. They appear to have enjoyed great popularity, if we may judge of the number of their subjects which were engraved, and their works were executed in imitation of marble and bronze; the colours employed were principally terra verte and terretta.

Roofs.

Having thus described the various ways of ornamenting a façade, it may perhaps be as well to add a few words about the roof. The roof can be covered with lead, slates, or tiles. If with lead, the lead can be partially tinned either before it is put up or after; it is needless to say that the former makes the best job. Remains of historiated lead-work are to be found in various parts of France, e.g. at Chalons-sur-Marne. Sometimes the tinned parts were covered, if in a sheltered place, with a thin coat of transparent oil paint, the lead being left for the outline: this occurs in the lead *flèche* at Amiens. Gilding is also often applied to lead, but it is not lasting, as the rain washes off the metal in course of time, leaving nothing but the coloured mordant to tell what has been there. Crestings and figures can also be made in lead, and add greatly to the beauty of the roof. They can be equally well applied to slates; which, by the way, were anciently about three times as thick as they are made in the present day. Slates can be procured of various colours, and arranged in patterns on the roofs; they can have their edges rounded, or made into an angle, or otherwise ornamented; but it may be questioned whether anything is preferable to a roof of good green slate, and if there is a good cresting there will be but little occasion either to cut the edges or to mix them with any other colour.

Tiles, also, can be made into any form, and can be coloured and glazed like any other pottery. The cathedral at Mantes possesses a roof of glazed and coloured tiles disposed in an elaborate species of Greek fret, and many of the houses at Dijon have roofs with the different coloured tiles disposed in patterns. At St. Andrea, Vercelli, the pinnacles and spires are covered with tiles in the form of truncated cones, coloured and glazed; and while upon this subject we must not forget the bronze tiles of the Pantheon, so barbarously taken away to make the hideous baldachino at St. Peter's, or the gilded tiles over the bow-window at Innspruck.

Such, then, are some of the ways by means of which our ancestors made their houses pleasant objects to themselves when living, and studies hereafter to their descendants. Now let any one go into Harley-street, Baker-street, or any other respectable thoroughfare, and look at the houses, and then ask himself whether they are either beautiful objects or things to study. Carefully looked into, they resolve themselves into very dirty brick walls, pierced with a certain number of square holes, one house exactly resembling its next neighbour. I protest, in spite of modern opinion, I like the painted stucco of Belgravia better than what is called the honest brick of Baker-street; the stucco can be re-painted and made clean, but hardly the brick. Although thus much may be said for the plaster, if it be once neglected it rapidly goes to the bad, for instance, the exterior wall of the Colosseum, in Albany-street, has not been painted for some time, and looks anything but what it should.

We must always bear one thing in mind, and that is the London smoke and its attendant acids and gases: it is said that its influence extends to no less a radius than forty miles, and if we wish to counteract it, we must face our dwellings with some imperishable material which will afford no lodgement for the smoke to penetrate, and which will sustain without injury a periodical cleansing by means of a fire-engine.

Now marble will hardly fulfil these conditions, seeing that it has a great faculty of losing its polish and getting its surface disintegrated in this climate; thus, the celebrated Marble Arch has been twice scraped and cleaned within the last fifteen years: so that marble will not do. Granite does appear to keep its polish, but then it is very expensive, and very hard to work, and not of a very pleasant colour. Stone is not very successful: if soft, it soon decays; if hard, like Portland, it gets very white in some parts and very black in others; this parti-colour I have heard poetically compared to ebony and ivory, but I am afraid that there is more ebony than ivory, and indeed we should only be too glad to dispense with it altogether. Stone cannot be cleaned except by scraping, which involves a scaffold, and cannot be often repeated; the same objection holds good with regard to brick or terra cotta, except that when dirty it is of a much more disagreeable colour than stone.

Graffito-plaster and paintings are all open to the same objection, viz. that of getting intensely dirty, without much power of being cleaned. We have, therefore, as far as I can see, but three courses open to us: the first is, to build the window-dressings, doors, &c. in majolica, plaster the walls between, paint them with subjects, and then cover them with large sheets of plate glass: this is the first. The second would be to supply the place of the paintings covered with glass, by means of mosaics. Now these mosaics might be made in various ways: 1. they might be of glass chopped up in the regular manner, as Signor Salvieto does it; 2. or made of sticks of glass broken off short, in Mr. Fisher's manner, (see the stained glass exhibition); or they might be manufactured in earthenware and glazed. I do not think unglazed tesseræ would do, as the smoke would stain them like bricks. It is by no means necessary that these mosaics should represent subjects, although it would be a gain for them to do so; on the contrary, they might be diapers, and the tesseræ might be made like some discovered near Babylon, viz. in the shape of cones, with the bottom part glazed. Some system might also be found for making figures in pieces of stained glass, foiling them from behind, and then embedding them in mortar or lead. Messrs. Powell, of Whitefriars, have invented something of this kind, but I am afraid that their material would be too porous for external use. We now come to majolica, which with mosaic would, I think, solve the problem before us. It should be remembered that, thanks to Messrs. Minton and other manufacturers, we can now obtain majolica both in relief and painted; it is true that at present it is rather dear, but should an increased demand arise, it would doubtless go down in price. M. Roussel's system would give us great advantages in the pictorial part of the work, while it would rest with the manufacturers generally to give us a glaze that would not shine too much in a side light, and at the same time would stand the frost. With these advantages I really see no reason why we should not have buildings in smoky London glowing with imperishable colour, while the other processes would still be applicable in country places beyond the reach of the fumes of London. At present we are building in stone, and brick, and plaster, which we well know in a few years will be so black that no ornaments can be distinguished. With painted majolica and mosaics all this would be changed; but people can

hardly be expected to spend much money on their houses as long as they know that they are building for the benefit of the landlord and not of their descendants; hence a change in the law of leasehold is the very first thing required. In the meantime, the study of the numerous beautiful objects in the South Kensington Museum and elsewhere will do a vast deal, as it has already done, for the diffusion of a correct taste both in drawing and colour; and were the study of the figure more general with ornamentists, we might possibly arrive at good results rather sooner than we generally believe.

THE MODERN DEVELOPMENT OF MEDIÆVAL ART.

Some short time since, my friend Mr. Seddon, the Secretary of the Royal Institute of British Architects, wrote a paper which when read at that Institution caused no end of an outcry. The subject was essentially the same as mine, and the ostensible cause of the outcry was the cutting and humorous names he gave to certain modern developments of Mediævalism, to say nothing of sundry hard hits at what is generally, and perhaps facetiously, called Classic art. But, although much decried, Mr. Seddon's remarks were perfectly just, and the terms employed in his paper were probably far too amusing to fall into oblivion. However, I have not the least doubt but that his remarks will do a very great deal of good; for there are many persons who are perfectly proof against any amount of good advice, but quail before ridicule. Mr. E. Godwin, of Bristol, has also made some very true observations about the present state of Mediæval art, in a paper which was read before the Bristol Society of Architects. He also has treated the subject in a humorous manner. But the fact is, that the matter is an extremely serious one, and as I by no means wish to pay you the poor compliment of supposing that you are only to be convinced by ridicule, I propose to consider the matter in a serious manner; for, after all, the Association is the future life-blood of the profession, and if you do not correct your errors, or if you get into a bad way, what hope can there be for our future architecture[a]?

It will be observed that I confine my remarks to the modern development of Mediæval art. By this I by no means wish to imply that the so-called Classic development is more perfect. On the contrary, it contains just as many, if not more faults than our modern Mediæval art, and if I do not speak of it, it is simply that I really do not care what becomes of it. The architecture of Greece was most exquisite; that of Rome was coarse, but magnificent; both glowed with colour, but both are unfitted for our climate. What is called Italian

[a] This lecture was read to the Architectural Association.

appears to me to be simply a grouping together of Roman details, often very much misapplied, and utterly unlike anything imagined by an ancient Greek or Roman. But I need scarcely enlarge on this point, for it seems now to be almost generally recognised that some architecture founded upon that of the Middle Ages is the most suitable for our climate, and it consequently attracts the attention of the younger members of the profession; so much so that all the designs for the prizes of the Institute on the last occasion were Mediæval.

The story of the revival of Mediæval art has been so often and so well told, that it is almost superfluous to go into it on the present occasion, a very few words will therefore suffice. It might almost be doubted whether Mediæval art has ever been thoroughly disused in England; for we have the chapel in Lincoln's Inn by Inigo Jones, in which an attempt was made to go back to the Geometrical Decorated style. The piers of one of the arches of old London-bridge were rebuilt in what was then called the Gothic taste; while Batty Langley and Horace Walpole did their very worst with the art, inasmuch that their works have become by-words. The curious part of the matter is, that they have some grotesque resemblance to late Italian Mediæval art, or rather, the latter is the only thing that they at all approach. Nor did Sir Christopher Wren succeed much better; witness his western towers of Westminster Abbey, and his wretched restoration of the great portal of the northern transept, which latter I most sincerely hope to see in the hands of my friend Mr. Scott, it being a far more crying deformity than anything inside. Indeed, had I the honour of being the architect to the Dean and Chapter, I should certainly give my clients no peace until they allowed me to remove so great an eyesore in one of the most conspicuous places of our metropolis. To resume our subject: Mediæval art owes its present revival to the labours of three individuals, viz. Rickman, Blore, and, above all, Augustus Welby Pugin. The first did us the great service of distinguishing the various styles, and publishing books to guide our researches [a]. The second, who is one of the most minute and beautiful architectural draughtsmen the world has ever beheld, throughout a long and active

[a] Mr. Rickman's successor, Mr. J. H. Parker, has worthily continued this part of the work by means of the Oxford Glossary, the enlarged edition of Rickman, and other similar works on English Mediæval architecture.

practice erected numerous buildings with correct detail. But it was reserved to A. W. Pugin to wake us up by his enunciation of true principles; and although his sharp satire doubtless hurt many people's feelings, it did immeasurable good to everybody in the profession. But Pugin was only one man, and the most gifted of us can only do a certain amount of work. It was, therefore, lucky that about this period the subject was taken up by the much-abused Cambridge Camden Society, and right well they did their work: by means of patient investigations of our parish churches, and by means of most unsparing sarcasm, they at last drilled architects into building churches by recipe. No one at the present day does build a bad church—I mean such a church as we but too often saw some twenty years ago; and, therefore, let all honour be given to the Camden, now the Ecclesiological Society. A few words ought to be said as to the different styles of Mediæval art in which all these different teachers worked. Thus we have seen Inigo Jones leaning towards Geometrical Decorated, and Rickman and Blore went in for the Perpendicular. The majority of the Peel churches were built in Early English, because, as Mr. Hope most truly observes, that style was supposed to survive more starvation than any other. Pugin practised in many styles, but his *forte* was in French Flamboyant, although converted from it by my esteemed friend Dr. Rock. The Ecclesiological Society enjoined Decorated. Now all this was mere architecture, or rather, the bones of the building without the flesh. Mr. Ruskin arrived to supply the deficiency, and to point out the intimate connexion between good sculpture and good architecture; he also directed people's attention to the beauties of early French Gothic, and afterwards to that of Italy, although I am afraid that his lessons in the latter have hardly been understood as they should have been. Much, very much, is to be learnt from Italian Mediæval architecture, but its details by no means suit it either for our climate or materials; and although certain things may look exceedingly well executed in marble in the half-Oriental town of Venice, it hardly follows that they should do so executed in soft stone, and placed in a street of some provincial town. So much is this the case, that I am half afraid that nearly all our faults in modern architecture may be traced to the misuse of Italian examples. Of course Italy is a delightful country to study in, and replete with all sorts of

associations, and it is far more pleasant to make a tour which shall include Florence, Venice, and Rome, than to spend week after week in a dull town like Chartres. When, therefore, it was found that Mediæval art could be studied in Italy, students of the new school flocked thither, and, wishing to bring back telling sketches (the curse of architecture), copied the details which ought not to have been copied at all, forgetting to study the great broad masses, the strong unchamfered angles, the beautiful figure sculpture, or the wonderful frescoes. It may be asked, What has an architect to do with sculpture or frescoes? I repeat, that unless he can give small drawings sufficient to shew what groups or figures he wants, and what those figures are to do, he only knows one-half of his profession, and has only half a claim to be considered an artist. The same with regard to the frescoes: he should know how to dispose of them in the building; how to separate them by bands; how to allow for height of situation; and, in fact, be able to give every assistance to the painter actually employed in their execution, and for all this he must know how to draw the figure tolerably; but if he has studied these things, and can draw the figure tolerably, he will be able to make the building interest the spectator, and tell wondrous stories, without a moulding or piece of foliage in his architecture. It was to this that Mr. Ruskin alluded when he said that a square yard of stone was sufficient for any man to shew what was in him; and so far as I may be permitted to say so to such an authority, I consider Mr. Ruskin to be thoroughly in the right. If a man cannot do the things above enumerated, he takes refuge in foliage, notches, chamfers, and other specimens of misapplied ingenuity, and when the work is done it is never satisfactory; it tells no story, and the beholder grieves that the same ingenuity had not been more artistically or more practically directed.

I now propose going through a few of what strike not only myself, but many others of my *confrères*, as some of the more crying defects of the modern development of Mediæval art; and, as I bear malice against none, and wish to hurt nobody's feelings, I shall mention the names of no persons and of no buildings. I am aware that the subject is unpleasant, and one which it is rather dangerous to take up; but the Mediæval school has made so much progress, not only in ecclesiastical

buildings, but, what is more, in domestic ones, that I feel that it is hardly the time to keep silence; and, in fact, as the rising school, we cannot afford to do so. Again, did I not feel that my views are, to a great extent, shared by others in the profession, I should hardly set them forth in this public manner; but both Mr. Seddon and Mr. Godwin having done so before me, I feel less diffidence, more especially as I hope I shall not be left the last to raise my voice against what appear to me to be crying evils.

And, first, as to what may be called rhythm in building (1). If we look at the façade of any large building of the Middle Ages, we shall find nearly as much regularity as in a Classic building; i.e. the various parts all balance; if they do not, there is always some good reason for it. Thus, the tower of the Palazzo Publico, at Florence, is not in the centre of the building. Doubtless, Arnolfo would have placed it either at the centre, or at one end; but then it was wanted to command a certain street; and, accordingly, it was placed to command the said street, and is much out of the centre. Modern buildings look very much as if they had been shaken about in a hat, and that the windows were shoved out just where they were wanted. Now, in a little country town, or in the back of even a large building, this is to a certain degree allowable, and conduces to the picturesque; but it would not do for the front. There the architect must take more pains, and try to bring in his windows so as to balance in the general composition. Of course, this is much more difficult to do than letting them crop out where they may be most convenient; but it can be done with care, and, in fact, it is simply an affair of trouble and ingenuity. Another thing is, to get the building broad and uncut up at the base,—to get the same strings running uninterruptedly through, to increase the decoration towards the top, and to cut up the sky-line, as recommended by Mr. Hope.

There is one great thing to praise in that not very satisfactory building, the New Houses of Parliament, and that is its rhythm. Each part balances the other, and you can see at once that the man who designed it was, at all events, master of the great principles of his art.

2. The next point is the colour. No one is satisfied unless the building presents a most piebald appearance; red bricks, yellow bricks, black bricks, and even tiles, are all pressed into

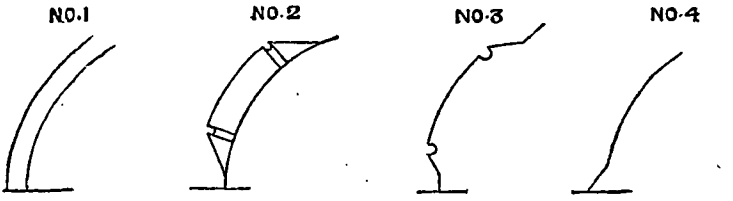
the service. Now it is undeniable that in certain cases in a brick building, a band of differently coloured bricks may do good service as a string or label to unite the various parts; but that is no reason why it should be repeated all over the edifice. The Italian walls of stone and brick are purely constructive; at least one I saw at Verona was; the stone courses being connected together and forming coffers, which were filled with rough brickwork. Some modern buildings have courses of tiles, of the most sickly colours if glazed, or if unglazed of washed-out red and buff—the latter a colour very fashionable with decorators, and which it might be hoped Mr. Ruskin had entirely demolished, for he says that it is like nothing in nature. If brick must be used, I would suggest a much more sparing application of colour, although it is impossible to conceive anything more melancholy than a London brick house after it has been erected fifty years, and it therefore becomes a most serious thing to suggest with what material our modern London buildings are to be faced! So corroding and so black is the smoke, that positively nothing will resist it but polished granite or glazed earthenware. The latter would offer an immense field for art in the shape of tiles of good colour, or of painted majolica; but I question whether such buildings would look well in a side-view, when the glaze would reflect the light.

3. The use of marble is another of our eccentricities. Employed as the shafts of columns, or in large slabs, nothing can be better; but somehow or other, unless as shafts, it seldom looks well in connexion with stone. Thus I venture to dissent from those elaborate works in Caen stone, where marble is introduced in the shape of half-spheres or of inlays. The polished surface of the marble does not harmonize with the coarse and unpolished surface of the stone; and the eye is likewise attracted to the marble, to the neglect of the sculpture or architecture. If marble really be used in conjunction with stone, I would suggest that it be unpolished.

4. Another point is the abuse of tiles. One sees them everywhere, even on walls; and the same thing may be said of incised stone. Nothing can be better than the latter for pavements, as it affords room for any amount of art; but walls should be painted, for that is their legitimate mode of treatment, and putting incised stones into a wall appears to me to be doubling the expense for no particular good. It is

true that it is more durable than painting, but then you lose all shading and all colour, except in your outline, and what is painting without shading and outline? As to tiles, even the best of them quickly wear out, and at the present time there are few to be got—if any—that have any claims to art, say like those discovered at Chertsey.

5. But the great delight of the modern architect is in his chamfers: he chamfers everything he can possibly get hold of, whether there is any necessity for the process or not. Sometimes he makes very curious mistakes. Thus nothing is more lovely than the curves of a pointed arch (No. 1). You get the two lines of the chamfer and the surface between in perspective as you move about it: every view you take varies its perspective, but it is always pleasant because the lines are unbroken and run round; but now apply the chamfer in the middle of either side of the arch (No. 2.), and stop it, and see how bad and broken the lines at once become as they get into perspec-

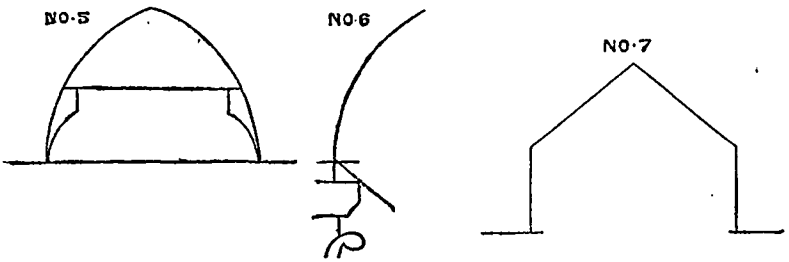


tive (No. 3). Or, suppose you want to bring a square archivolt on to an octagonal or circular column, and instead of making the transition by means of the bell, or of the abacus, you do so by cutting away the angles of your archivolt, see how very weak you render the whole affair (No. 4). Chamfers are very good things in their way, more especially in woodwork, when you cannot get mouldings; but it is quite possible to have too much of a good thing.

6. Not unconnected with chamfers are the notchings now so frequently seen in new buildings. Notchings in a huge spire may do duty for dogtooth; but that is no reason why they should break out in parts where they are least wanted. Archivolts are notched; the upper edges of the abaci of columns, where a straight line is most imperatively demanded by the eye, are notched; the lower edges of mouldings are notched, till they look like what milliners call inserted work; even our very furniture is notched. One of my friends possesses a table

where the lower edge of the top is thus decorated, greatly to the discomfort of his visitors' knuckles. After all, this notching, although very cheap, is very barbaric, and I believe is indicated by Mr. Owen Jones as among the very earliest of the attempts of the savage mind for the decoration of the war-club.

7. The management and the form of the arch are most important considerations; and every kind of arch in itself is so very beautiful that it would almost appear impossible to make an ugly one; but, thanks to modern ingenuity, a great deal has been effected towards that end. I have already spoken about the top-chamfering, but an equally efficient way is to insert a tympanum which does not come down to the springing (No. 5). The eye always requires a line, either real or imaginary, to mark the springing: put this line a little below, and it does not much matter, as in the case of the best French art, where the arch is always slightly stilted to allow for the portion taken off by the projection of the abacus (No. 6); but, on the con-

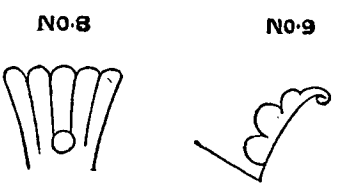


trary, draw this line above, and, somehow or other, the sensation is never pleasing. The Pointed segmental arch, although frequently employed in England during the Middle Ages, is seldom satisfactory, of whatever altitude it may be. See the entrance to the Chapter-house at Westminster, where, however, I strongly suspect some inner moulding has been chiselled off. Sometimes, however, this segmental arch becomes a necessity, as in the groining of the passage in the same building; but in every case it should be a subsidiary affair, and never employed in the principal windows of a façade, as we too often see it; or, indeed, anywhere else where it can be avoided. Another form of arch is really no arch at all, but has the advantage of being inexpressibly ugly (No. 7). It was very rarely employed in the Middle Ages, but still there are examples of it, as well as of everything else that is bad. Of course, it is never used constructively, for it would not stand; but it too often in the pre-

sent day acts as a containing line to dossels, doors, coupled windows, &c.; in fact, it is considered a cheap and easy way of making a thing look strong. This endeavour to get apparent strength by the employment of straight lines where our ancestors would have used curved, is one of the greatest of the faults in art of the present day, and of all is the most painful to the eye; and I would even venture to say that no man who has ever properly studied the figure would be guilty of such a thing.

8. Some years back Mr. Street, in a very excellent lecture at the Architectural Museum, suggested the greater employment of small columns in the place of ornamental buttresses. The suggestion was most excellent, but unfortunately it has been worked to death, and we even see columns mast-headed on the tops of our highest gables, and figures on the top of them.

9. Before dismissing the stonework, I might mention the abuse of foliage and of strings—the former covering the building or object until it looks like a petrified arbour, and the latter jumping up and down in a most spasmodic manner. But these are hardly the faults of the present generation. The strings now-a-days are generally managed rightly; and if there should be a little money over (an event which very seldom happens to a younger member of the profession) we generally do try to get a little sculpture, instead of spending it on foliage. Some of our modern foliage, however, has taken a very crude and ugly development. Thus we see truncated leaves (No. 8) and stalks jutting out at right angles, or less than right angles, from each other (No. 9), besides sundry other offences against good taste; the origin of all which will be found in the endeavour to get strength — a very laudable one, but hardly successful when obtained by means of straight lines instead of curved. The effect of some of the foliage in the 1862 Exhibition absolutely resembled that of the time of Louis XIV. instead of the thirteenth century, while one or two of the objects were completely smothered in leaves.



10. But our woodwork is still very faulty, being for the most part a very great deal too cheap and thin. I am not so much of an antiquary as to advise the use of oak instead of deal for

our roofs. Oak was the common wood of our ancestors, but deal is the common wood of our own time; and, had the case been reversed, I am quite sure that our forefathers, like sensible men as they were, would have employed fir. If, however, we look at the majority of thirteenth and fourteenth century churches, we shall find very few open roofs. On the contrary, the roof is generally of the simplest construction, often with tie-beams to keep everything together, and boarded to the bellies of the rafters—sometimes even a flat-boarded ceiling is the result. This afforded space for painting, and provided an air-chamber between the church and the outer rafters: hence the edifice was cool in summer and warm in winter. A small window opened into this air-place, and afforded means of ventilation. Now, compare this with a modern church roof. The timbers are of the smallest possible scantling; the roof is open to the top (No. 7), so that in reality we see the straight-lined arch magnified to its fullest possible extent, and the little window, deprived of all use, twinkles up above, and only serves to throw in light where it is least wanted, and to expose the poverty of the whole affair. In the present day so many people have got to consider an open roof as a *sine quâ non* in Mediæval art, that it is very difficult to persuade them to the contrary. An open roof, to look well, requires very large and very intricate timbers, or it is almost certain to look poor. Most of the open roofs of our own country are of comparatively low pitch, and the space between the principals was frequently boarded and painted, and treated like a ceiling.

The same objection may be made to our church furniture. It is generally very poor and miserable. It is very true that the mouldings in woodwork should be more slender and cut out than in stone, but then they are generally combined in masses, and the whole effect is sharp and solid, as it ought to be. The best pieces of ancient woodwork I know of are the stalls of Amiens Cathedral.

There are very many other points I may enlarge upon, more especially those of stained glass and sculpture. A protest should also, I think, be made against the common plan of filling in the whole of the windows of a building with large pieces of plate glass, whereby all scale is lost. Plate glass is a very good thing, but surely the upper parts of a window might be filled with lead or iron patterns, and thus some scale be obtained.

But I think I have said enough upon rather invidious subjects, and such, as I said before, that I should not have touched upon if I were not sure that very many of my *confrères*, both young and old, thought with me.

I have very often said, and, even at the risk of being thought tedious, I must repeat it again, that the great and crying defect of the art-architect at the present day is the want of the knowledge of the human figure; and until that is obtained I am afraid that there will be but little progress. I say art-architect, to distinguish him from the surveyor-architect, who makes a good deal more money and has a great deal less to learn, besides being generally thought a more useful member of the community. In fact, the trials of an art-architect of the present day are nearly as great as those of the alchemist of the Middle Ages. If he has money, ten to one but he will not work at so unprofitable an occupation, where he sees all the work in other hands, and where he may have to labour some twenty years before he gets his share. If he has friends who will back him and get him work, so much the worse for him, for he will have to consume that time in the execution of works, and the writing of letters, when he ought to be improving himself and others. What really is wanted is just sufficient work to keep him a-going, or occasionally a good large competition; for I by no means consider competitions as unmitigated evils. Only there are two questions which should be satisfactorily answered before going in. The first is, What is to be the style? as in the present day we have no less than two, which is one more than any other epoch ever had. Unless this question be answered, it is clearly fifty to one against the competitor. The second question should be, Is a professional man to be appointed judge? It is obvious how important it is to have this answered in the affirmative; for, besides the committee having in all probability no knowledge of architecture, it will generally be found that their bias is towards what is called the local man; and, indeed, they would be less than human if they did not have this bias, remembering that they travel with the said local man, that they dine with him, they meet him at dinner, and they have had or may have local dealings with him, and, therefore, as I said before, they would be less than human not to prefer him.

Having said so much, I have only to reiterate my advice to

the art-architect to learn all he can of the figure; and while he does this, and while he may be filling up his time with drawing cartoons, never on any account to give up or think of giving up his profession. It is true he may see his way to making more money at the present moment, by drawing cartoons, or designing sculpture, or drawing on stone, but all this while he is an architect. He has been brought up as an architect, and the profession has a right to his services; and if she is unkind and gives him but little at present, it is his duty to persevere and never neglect her; for the time will come when she will have occasion for his services, and if he is not in a position to take advantage of it, his place will be filled by another, and most probably, a less educated man, to the great loss of the art.

It is for these reasons that I have ventured to say a word in favour of competitions, and if some regulations could be drawn up either by the Association or the Institute, or still better, by both conjointly, I believe a great deal of good might ensue, and transactions which at the present moment are often but so much gambling, and that with loaded dice, might be rendered excellent means of bringing good men forward, or, at least, of causing them to exercise the knowledge they possess.

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Printed by Messrs. Parker, Cornmarket, Oxford.

Digitized with financial assistance from the
Government of Maharashtra
on 18 July, 2018